

— SUSTAINABLE LIVING AND PLANET CARE —

EARTH GARDEN

— FOR BUSH OR CITY ALTERNATIVES —

Subdivide: How Jen & Jarrod Convinced The Council — See p48

Make Your Own Haybox Cooker

Keeping Happy Chooks

Build Your Own Stock Fencing

Evergreen Walnuts

Keith Smith: Sunflowers

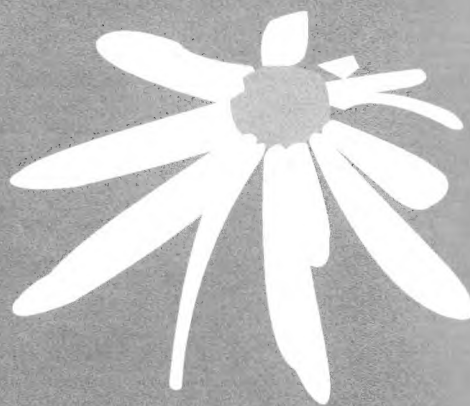
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Front Cover: Jen and Jarrod Ruch successfully convinced a rural council to let them buy part of Jill Redwood's farm in far East Gippsland — despite council regulations prohibiting small subdivisions. Jill and the Ruchs prove that councils can be convinced of the merits of Earth Garden-sized subdivisions — if you approach them correctly. Learn how Jen and Jarrod did it in Jill Redwood's article starting on page 48. Photograph by Jill Redwood.

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Back Cover: Let there be citrus! Jenny Allen's baby son, Ziggy, surrounded by ripe pumelos on their property at Maleny in Queensland. Jenny describes the delightful and multiple ways you can use citrus like ripe oranges for food, firelighters, fertiliser and more, starting on page 14. Photograph by Dean Cameron.

EcoTax: this issue's EcoTax will go to Environment East Gippsland to help pay for further hair tubing work, which has successfully saved around 500 hectares of ancient forest in East Gippsland from being clearfelled, after evidence of an endangered tiger quoll was found by the group. See the article in Bush Telegraph on page seven for more details.



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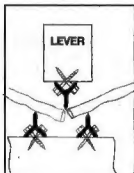


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Founded by Keith & Irene Smith, 1972.

EARTH GARDEN is Australia's original journal of sustainable living and alternatives. It is a forum of practical ideas, shared knowledge, sources and a guide to alternatives to high-consumption lifestyles. It's about putting a roof over your head, growing your own food organically, aiming for appropriate, renewable home energy systems and surviving — and thriving — in the city or the bush, with the inner changes which follow when you're in harmony with Nature.

EcoTax: each issue we donate a portion of the cover price to a community group involved in tree planting or conservation projects to help balance the use of the partly recycled paper used for printing *Earth Garden*. We would like to see all publishers pay an EcoTax.

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Beyond The Bitumen

Dear readers,

Welcome to the autumn issue of *Earth Garden*. We've had a strangely mild summer here in the hills north-west of Melbourne, and as I write this in mid-February we've hardly had any hot days, and not many hot afternoons swimming at the dam either. The photo below shows my four little ones when they got all enthusiastic one morning and decided to plant up a kitchen garden bed out the side door.

Adelaide was, of course, ordering the three labourers around until she decided that it looked like fun, and despite her habit of sitting on the lettuce seedlings, Harry made sure she got to help plant lots of seedlings. Adelaide is now one year old and crawling like mad after the three boys (slap, slap, slap on our wooden floor), and when Tane is home from university she has another one to carry her and boss around.

We've had a lovely summer at home since we finished some major renovations: painting our poor old peeling house (which used to remind us of the one in Tim Winton's *Cloudstreet* — all creaks, groans and peeling paint but full of the sound of happy children). Now it's looking pretty flash and with polished floorboards, a new bathroom and other little renovations, we are feeling like squatters who've taken over someone's fancy home.

We've been trying to start the day with a bushwalk — all of us together — and it's so much fun. We talk about all sorts of things. The other morning as we walked along, Bertie and Harry asked me why there was blue paint sprayed on some large forest trees along our rear boundary. I told them the story as we walked along about how when I'd first

bought our block of land in 1985 I came up one day to find a government forester marking out a coupe to log, woodchip and burn to our boundary. Then I told the boys about how we negotiated with the government not to log, and somehow this turned into a 30 or 40 minute chat about the life and actions of Mahatma Gandhi. Judith was regaled by six year old Bertie later that day with endless tales about a little man who got kicked off a train in South Africa and then went on to make his own salt. By the time Judith got the whole story it was hilarious how many little tidbits Bertie had added, amended or improved.

We walked up to our tree farm the other day (about 30 minutes through the forest) and were delighted to see how well our trees have been growing. We've been so flat out renovating home, working on the magazine and helping with family maintenance chores that we haven't had time to get to our tree paddock for ages. Thanks to our dear friend, Dave Griffiths from Geometree, we now have a flourishing tree farm and have proven that it's not necessary to spray any chemicals — to prepare your ground or manage your trees — for a successful, commercial-scale tree plantation. Some of our trees are now nearly five metres tall, and the stems are 50 mm or more thick at breast height — and they turn two years old this month.

Once this issue is off to the printers I'll be out there on my tractor mulching between the rows to reduce the weed competition. And in a year or so our major project of pruning the trees' side branches, to produce fine quality timber, will begin. My eldest son, Tane, spent a couple of weeks last November replacing broken tree stakes, fixing busted plastic guards and generally undoing the hard and conscientious work of the local kangaroo and wallaby population. Our combined efforts have now led to a very satisfying tree farming result, and we're looking forward to watching the trees grow big and fat.

So what's this all got to do with the latest issue of *Earth Garden*? Not much at all really, except that sometimes I meet people who don't really believe you can lead 'the good life' any more.

You can. Lots of *Earth Garden* writers and readers do, and I hope this issue helps you get on (or back on) that path.

Happy reading,

Alan



Bertie (left), baby Adelaide, Woody, and Harry (right) planting salad vegie seedlings in a kitchen garden bed at home recently.



Earth People Write is an open forum. The views expressed in letters from readers do not necessarily reflect the opinions of *Earth Garden*. Letters are always welcome, but please keep them concise. This issue we're giving away to our favorite letter writer a copy of *Home Farmer Volume Two*.

Clever shopping bags

Hello Steve,

I saw your request in *Earth Garden* about a pattern for shopping bags. I only have a pocketmail and cannot send you a pattern — no doubt you will get some from other readers. What I want to let you know is that you can make really easy bags out of unwanted tank tops by sewing the bottom and squaring off with a right angle, corner-cutting line of stitching. The arms and neck holes provide a ready-made pair of handles (which is the fiddly bit to sew on a homemade bag). Presto! Cheers and good luck,

<Florence.florence@pocketmail.com>.

Coffee beans/olive press

Hi there EG,

I wonder if any of your readers know of an easy way to get the skins off coffee beans — my fingers and nails are sore trying to peel them. I would also like to know where I could purchase a small olive press for my olives. Would love to hear people's ideas. Thanks,

David Lowson, email <davidlowson@hotmail.com>.

Coloured cotton seeds, earth pots and plant soap

Hello 'Earth Garden',

I am a spinner, weaver, felter (and many more handicrafts — too many) and I really want to find some natural coloured cotton seeds in Australia. There seem to be many overseas but I don't think customs will allow me to get them sent to Australia. Do you know where I could get brown and green cotton seeds in Australia?

I travelled to Taiwan a while back and I came across a liquid soap made from the soapberry tree (actually made from the hulls of the seeds). They told me that I

should just take the hulls and rub them in my hands with a bit of water and it would lather up. I was very excited when they showed this to me and have been trying to locate such a plant in Australia. Do you know of anything native to Australia that makes soap in a similar way?

And last but not least my mate told me about a pot that could be moulded from earth. It is just made from compacted earth (I think it may contain other things to maintain its shape and strength, maybe straw or manure?). This pot would hold seedlings and be transplanted straight into the soil. It would loosen and become a part of the soil as the seedling grew. Has anyone heard or seen details of this environmentally friendly pot? I really can't thank you enough for reading through this muddled email. Thanks!

Julia Trezise, email <brownbook@iprimus.com.au>.

Dear Julia,

An old bushie once told me that old timers took a handful of blackwood leaves (Acacia melanoxylon) and washed their hands with them but I've never actually tried it. Good luck.

—Alan.

Country getaway near Sydney?

Dear 'Earth Garden' readers,

I am wondering if there is anyone who can help me. I am looking for a weekend getaway place on a farm a maximum of two hours drive from Sydney. I want to find a place where I can enjoy the peace and quiet, some space, read books play, saxophone and relax. Maybe it even has some water or a river around so I can go for a paddle. Or some good walks. I have been looking to buy an acre of land but this is all far beyond my price range. So I am turning to you! If you have a hut, caravan or what-

ever on your farm, which is free on the weekends (not even every weekend) and you wouldn't mind sharing a bit of space, I would love to come and enjoy a bit of your paradise!

In return you will meet a creative person (I am an artist, you can visit my web site at: www.outofsight.co.nz/karinsart) who is happy to negotiate babysitting, a few hours light gardening or help with farm animals in return! I am actually interested in learning about horses so if they are on your farm that would be wonderful! If anyone has any other ideas regarding a getaway place I would love to hear them too! I look forward to hearing from you.

Karin van der Plas, PO Box 3002, Willoughby North, NSW, 2068, email <karinlighthouse@hotmail.com>.

Bug aid to Africa?

Dear 'Earth Garden',

I have a garden which I started last year and I have faced many problems including bradaga bugs, grasshoppers, and red spider mites on tomatoes and aphids. I am appealing to anybody who can help to write to me or respond on this email address. Sailesi Lusias, <sailesilusias@yahoo.com>, PO Box HR8025, Harare, Zimbabwe, or <marianne@kufunda.org>.

Beyond WWOOFING

Dear 'Earth Garden',

My wife and I took up the *Earth Garden* lifestyle many years ago but see from the wwoofing column that many potential Earth Gardeners are yet to take the plunge. While wwoofing may be one way of trying before you buy, there is another way: house sitting. When we needed a holiday recently we decided to get some house sitters to look after our property (nine hectares) and animals (one horse and a small flock of

chooks). House sitters live in your house rent free while you are away and are supposed to feed your pets, water your garden and keep the place clean and tidy. There are several websites where house sitters and home owners can get in contact and they are pretty good, as far as they go.

They are not really set up for rural properties, however. We had a lot of trouble trying to find someone willing to take on this role for us and the couple we finally engaged, we discovered later, were really only after somewhere with the space to renovate their campervan and with no close neighbours to complain about the subsequent noise. When we returned from our six weeks away, we found our gardens overrun with chickweed, pot plants suffering from lack of water and that their dog had killed one of our chooks. Not only that, the campervan wasn't finished and, since it couldn't be moved, we had to agree to them coming every day to work on it for several more weeks.

It seems to us that there is a need for a house sitting forum where Earth Gardeners needing a holiday can be put in touch with people wanting to try this great lifestyle without needing a long time commitment or the capital to buy an acreage. Perhaps *Earth Garden* could set up a column like Land Lines in the back of the magazine? What do other readers think? We are planning on going away again for about six weeks in early June, anyone interested?

Paul & Irene Osborn, Cooranbong, NSW, email <passerin@dbworld.net.au>.

Dear Paul and Irene,

This sounds like a great idea. If readers tell us they want the service we could start it next to 'Land Lines'. To register your interest, please write to 'Earth Garden' at PO Box 2 Trentham, Vic, 3458 or email <info@earthgarden.com.au>.

— Alan.

Planning the journey

Dear 'Earth Garden',

Just a letter of thanks for the many articles that are beneficial on my voyage from city life to country life. To date I have it worked out on paper: the first really big step is purchase of land and after tying up loose ends in town, it's off to the country to explore the many avenues expressed by *Earth Garden*. Many thanks once again and keep the good work up.

Theresa Catt, Sale, Vic.

Handmade present joy

In reply to Rachel from Blackwood, South Australia, in 'Earth People Write' in EG 124. Dear Rachel,

Well done! I am a 'young' grand-

mother of nine beautiful children and just love going into toy shops; before I know it I have blown my Christmas budget. Last year my husband and I moved to Queensland to be closer to our family, but with the move came a cut in pay and a wee bit less money to spend. So for Christmas I decided everything would be handmade. My daughter painted small pictures for everyone, her partner made baskets. I went to libraries, borrowed in some craft and doll and bear magazines, which came with patterns, I might add, and set to work.

Feeling a little sad because I could not afford to buy 'trendy' presents for my older grandchildren I explained the circumstances to our nine year old granddaughter. She became very excited. "Oh good," she said, "Could you make me a merman?" It seemed that the children were hungry for novelty rather than trendy. Yes, I did make her 'merman'. I used felt and hand sewed around it. I first drew my own pattern and found some leather type material on 'special' at a material shop.

This has opened up a whole new world for me. Our grandchildren are delighted with every present Nani makes just for them. I have even been asked to make things for their friends, who "only get shop things" they tell me sadly. I gain so much pleasure not from just making things but also the hours spent poring over library books and handicraft magazines for ideas. I also recycle a lot of material. Bags to hang on the bedpost and fill with books, and so on. An angel is the latest request. The smaller children love my big 'fluffys' — a cross between a teddy and animal to cuddle. It doesn't seem to matter to them that what I make is not perfect. I felt I had been given an award the other day when my son told me his daughter had taken her Jack and Jill felt toys that Nani had made to school (for Show and Tell).

It has made me realise just how much we depend on commercial, factory-made things to show our love and appreciation. So try making things, it doesn't matter what, and see the pleasure it brings. If anyone wants the pattern for my mermaids and men please send me a stamped self-addressed envelope.

I love your magazine, it has kept me sane in the wait to go back to New South Wales. Yes, we are moving again! Hubby has already moved back to his old job and I am waiting here in Queensland with our dogs. He has finally found a house to buy, so your magazine has kept me from getting too lonely planning our next adventure.

I am making presents for my adult children this year, but seem stumped when it comes to the men. Would anyone have ideas for presents handmade for men?

Patricia Fisher, PO Box 365, Glasshouse Mountains, Queensland, 4518.

Port Hedland reader

Dear EG,

I love your magazine and one day hope to live in a climate and have the time to suit a bit more gardening. I enjoy Jackie French's items, the Land Lines ads and all the alternative energy information. In fact, there's not much I don't enjoy, and with such a diverse range of subjects, that's not bad.

Andrea Rasmussen, Port Hedland, WA.

Portable chook house for sale?

Dear EG people,

How I love reading this magazine; it's full of brilliant information. I wonder if anyone can help me in my quest for a portable chook house? I have tried the radio 'swap shop', the local paper and have been to various clearing sales, but, no luck! Years ago my husband designed and made a magnificent moveable chook house, with nesting boxes on the outside, but we sold it, thinking at the time that we would never have any more chooks. But now we have the space and need for them again. I hope someone can help.

Penelope Sutherland, RMB 1224B, Wodonga, Victoria, 3691.

Returning from Aotearoa

Dear EG,

I'm coming home! After more than ten years in New Zealand, I have become increasingly homesick for Australia. Our family has decided to move across the Tasman. My Kiwi husband and two NZ born sons and I hope to relocate in Autumn 2004. We are considering the eastern seaboard between Sydney and Brisbane at this stage. I have lived and worked on the mid north coast previously so am quite familiar with the area, though no doubt it has changed much during my time away. We would appreciate any advice or recommendations from readers about localities to move to, opportunities available, job prospects, schools, and so on. We are open to ideas and may just end up putting a pin on a map and trying our luck.

The Turners, 24 Glencairn Road, Twizel, 8773, New Zealand.

Liquidambers fire-retardant?

Dear editor,

Further to Jackie French's article on fire retardant plants (EG 125), I have seen liquidambar leaves being demonstrated on TV by a gardening identity. He lives in a high fire risk area in WA. The green leaf barely burnt at all and he explained that unlike gum leaves, liquidambar leaves break down very quickly before they can become a fire hazard. So when the fire risk is highest, the tree is at its greenest. As Jackie

pointed out though, a match under a green leaf may give a different result to a real situation where everything is being fanned by strong, hot winds.

Your magazine is a pleasant change from the fake world of fashion figures (fat/thin) and slander/gossip that fills the pages of so many magazines these days. I live in Perth and don't have the time or energy to do much 'Earth Garden' type gardening but I still keep two chooks and I still like to read about what others are doing.

I would be interested to hear if Jackie French has looked into liquidambars or other deciduous trees as fire-retardant wind-breaks. Once established (after a couple of summers), the two liquidambars I have, received no more water than the Geraldton Wax, which gets next to none through hot dry summers and they have grown quite nicely. I guess the Canberra bushfires proved though that nothing can withstand really extreme conditions.

I Murphy, Bassendean, WA.

Elephant garlic seed anyone?

Dear Alan,

This is the first time I have written to your wonderful magazine. We have just bought a few acres near Bega and we are using all those back issues of *Earth Garden* until they are getting very dog eared. I have been trying to get in contact with an email contact address on the bottom of a letter in your issue EG 117, September 2001. It was from Marie-Louise and Charlie who said that they had some seed stock of elephant garlic for sale. If they still have some stock we would be very interested to hear from them. They can contact us at <essexmail@ozemail.com.au>. Your magazine is slowly becoming our major work of reference; we are thankful to all those lovely people who share their expertise, experiences, disasters, and so on. We fully expect to be able to contribute some major disasters of our own very soon as the city slickers move to the country. Once again thank you and your staff for a wonderful resource. Kind regards,
Margaret and Steve Essex, Engadine, NSW.

Dear Margaret and Steve,

We hope the contact details for the Seed Savers Network and Diggers Club are useful, and Gary Thomas's article in EG 125.

— Alan.

Clever plastic bag replacement

Dear editor,

Please find attached a pattern to make a cloth substitute (light muslin) to replace the small fruit and veggie bags, and a sample to keep. With the current push to replace

plastic shopping bags with reusable material bags, the plastic fruit and vegetable bags have been overlooked. These bags are used in their millions. It is not uncommon to see shoppers with a lemon in one of these bags, a cucumber in another, three apples in yet another and so on. I have tried to collect all the fruit and vegies in one big basket and then sort them at the checkout for the operator to weigh separately but have found this unsatisfactory. An easy to make substitute can be made from muslin which is very light and the items can be put in their individual bags before taking to the check-out. Eight bags can be made from a metre of muslin at a cost of less than 40 cents each. The bags are an adequate size for fruit and vegetables but larger ones can be made if you buy bulk potatoes and the like.

The weight of each bag is about 13 grams compared to three to five grams for plastic bags. When a bag of (for example) apples is weighed in a plastic bag this costs an extra 1.2 cents for the bag. Using a muslin bag will cost 3.5 cents approximately — a small price to help our environment.

Pattern: cut a piece of muslin fabric 700 mm long x 265 mm wide. Fold in halves lengthwise and machine along the two side seams. Over-sew top edges of bag. Turn inside out and you will have a bag 350 mm long x 255 mm wide.

Sandy Retallick, Seacliff, SA.

Dear Earth Garden,

Spring issue 125 arrived and I am rather taken with John Herman's water wheel pump. I note that he says the intake for the coiled pipe should be larger than the main coils of the pipe. Now I wonder? You know those plastic cones which are used to squeeze the water out of mops and which are discarded in good condition when the mop disintegrates? Would one of those be suitable for an intake?

John Guest, Rockhampton, Qld.

Great idea John — thanks for sharing it.

— Alan.

Another viewpoint on biodiesel

Dear 'Earth Garden',

The vegetable oil/fuel-ethanol discussions (like James Peel, EG 124) deserve some assistance. Here is some from a one-time electrical engineer turned social/environmental scientist. A note before reading on: the following points are not intended to knock either biofuels nor the conversion to fuels of carbohydrate-rich 'wastes' from food and fibre production. They are intended to knock or discourage the current thoughtless use of private driver-only cars for commuting in our cities, to discourage the use of arable land to fuel this extremely inefficient activity and to encourage a much wider point

of view when thinking about all our activities.

Biofuels of all sorts and especially ethanol, take quite a lot of energy to grow and extract from biomass. In the case of ethanol, up to the same quantity as it delivers when it's burned. That would mean an extraction efficiency of zero.

Cars do their job incredibly inefficiently especially when used to transport just their drivers. Conversion efficiency in the engine is around 20 per cent and since cars weigh 10 to 20 times more than their drivers, the car moves the driver at only 1 to 2 per cent efficiency. Factor in all the energy used in servicing, not to mention making, the car (and making and servicing all its infrastructures) and the efficiency of the car makes a good approximation to zero.

Even 'waste' biomass has biological uses, not least in nature itself. Committing a profoundly inefficient mass-market share to using it as auto-fuel risks making its production an end (demand) in itself. In other words, once biomass-for-fuel is embedded in our economy we will have come to depend on it and have difficulty cutting down on its use.

Energy efficiency is meaningless to most people because: (a) they've never heard of it and (b) fuel is cheaper than bottled water. So, even if one's heard of it, it just doesn't matter to most people. We must find ways to meter energy efficiency so that we notice it and act on low efficiency uses. For example, the energy star ratings on white goods are visible and understandable but so passive that they are widely ignored.

Finally, we are told that arable land is limited and that many people are starving or malnourished for want of access to cheap wholesome foods. If all this is true, cultivating land to hose its product down the drain of driver-only, urban commuter driving — where such options as a combination of bicycle and rail are much more energy and environmentally efficient, not to mention faster, cheaper and healthier — is obscene.

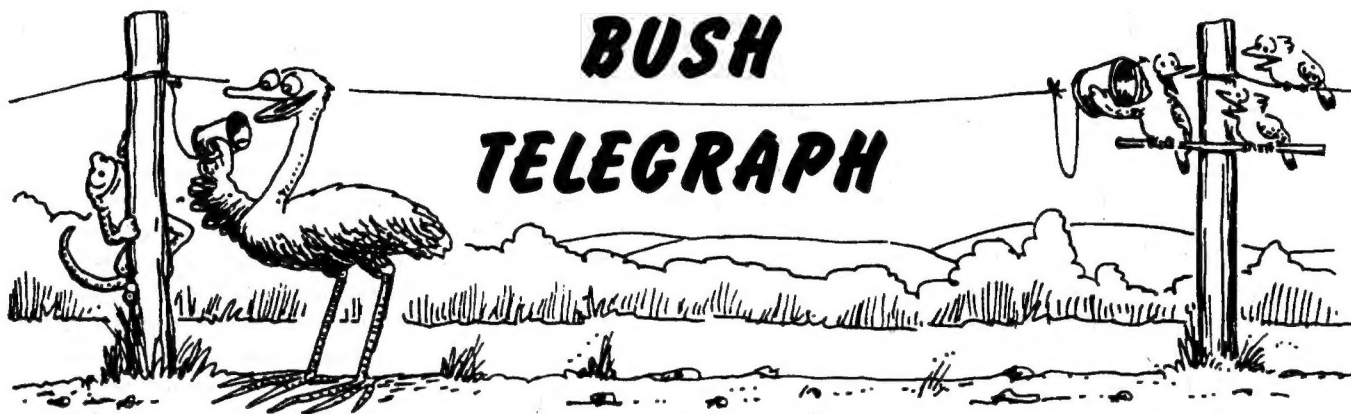
Let's stick to chemical, metabolic and 'medical' uses, like drinking the ethanol when we're not driving!

Frank Fisher, Monash University, Vic.

Evergreen Cherry Supplier

In response to those readers trying to find the capulin cherry, Daley's Nursery are a wholesale supplier of this plant. There could be a small delay in filling orders as Greg has been inundated with requests following Josef Tamaliunas's article in EG 126. Contact details are: PO Box 154 Geneva, via Kyogle, NSW, 2474, phone (02) 6632 1441, fax (02) 6632 2585, website: <www.daleysfruit.com.au>.

**Earth People Write
continues on page 68**



Any news items which may interest Earth Gardeners may be submitted to *Bush Telegraph*. Please send notice of meetings, festivals and gatherings well in advance of the events.

Tiger Quoll Find Saves Forest

In early February members of the Victorian environment group, Environment East Gippsland, found evidence of an endangered tiger quoll in East Gippsland at Little Ada Creek, outside the south eastern corner of Errinundra National Park. One of the hair tube traps set by the group over summer 'caught' hairs from one of the creatures. Hair tube traps are small plastic tunnels with sticky tape and bait inside: when the animal sniffs the bait, some of its hairs are caught by the sticky tape. Seventeen volunteers were involved in putting out and pulling in about 100 hair tube traps in January. They included Melbourne volunteers, local Goongerah residents and visitors.

"Every single volunteer contributed to this find, including those who publicised the event and laid out tubes in other areas, and others like the two Sale residents who provided a rest stop and a meal to the volunteers," said elated EEG member, Liz Ingham.

"To give you an idea of how lucky we were, one group of volunteers spent an entire day walking down the Errinundra River looking for the Little Ada River but were unable to confidently locate it. Another group walked for seven hours (and loved every minute!) the next day, located the spot and laid out 33 tube traps — the 29th of which attracted the quoll. Another group of four came back two weeks later to pull them in. And if volunteers hadn't laid out tubes already in five other areas, we would probably not have persevered with this particularly inaccessible area, and the quoll would never have been located," she told *Earth Garden*.



Analysis of the hair tubes showed a quoll hair, or hairs, in just one tube, but this is enough to convince the State government not to log the animal's immediate oldgrowth forest habitat.

"Considering the large home ranges of quolls, and the decline in their population, we are terribly lucky to have found one at all. I've been hair tubing on and off for ten years, and this is only the second time I've helped to find one," said Liz. The size of the reserve to be given to this quoll is still being determined by the State government. EEG is hoping to save about 500 hectares of beautiful untouched forest bordering the national park. Three areas were scheduled for clearfelling this year.

Says Liz: "Now, who wants to feel this good? Who wants to be a part of this? We want to plaster East Gippsland with hair tubes. So look in your diary, find a few spare days and email me on <lizingham@vicbar.com.au> so I can arrange the equipment and other volunteers. How would you like to look for tiger quolls near the newly discovered giant trees at Result Creek, or on

Brown Mountain? Or near the blockade site at Ferntree Creek? There are fabulous places to bushwalk and peaceful places to camp. Just give me actual dates that you can volunteer," said Liz.

March Organic Celebration

To recognise 20 years of promoting conservation farming methods, the Organic Agriculture Association is holding a 'Celebration of Organics' over the weekend of 13 and 14 March in Victoria's East Gippsland. This celebration will coincide with the very successful 'Grow Organic' biennial weekend seminar, which will feature interesting speakers, workshops, demonstrations, delicious organic food, and showcase organic products and services. Topics will include successful marketing and value adding of organic product, maintaining healthy soils, ecological farming practices, and lots more. The Organic Agriculture Association is one of the early pioneers in the organic industry and, over the past 20 years, members have initiated ground breaking industry development. The 'Celebration of Organics' event will bring together broadscale farmers, small landholders, and consumers to enjoy, learn and swap ideas. It will be held at Camp Coolamatong on the Banksia Peninsula near Bairnsdale in East Gippsland. For more information, contact the Organic Agriculture Association at PO Box 1263, Bairnsdale 3875, or telephone Robyn Grant on (03) 5157 1586.

Sydney Strawbale workshop

Ryde College of TAFE and 'Yesterday, Today, Tomorrow Strawbale Constructions' are presenting a strawbale building

workshop 'Building with Bales', on 1, 8, 15 and 22 May this year. The four day course covers the first stages of the building process such as: making the foundations, base plate and bottom plate, raising and compressing strawbale walls, applying the scratch coat and also much more. Cost: \$415 includes notes, lunch, morning and afternoon tea. These courses are largely practical with some theory and class notes provided and certificate upon completion. For more information or bookings please ring Ryde College of TAFE Business Centre on (02) 944 86301 or the tireless Penny Pyett on 9888 2575. Places are strictly limited so book early to avoid disappointment.

Melbourne Organic Food Fare

This year's Petty's Orchard Organic Food Fare will be held on 27 and 28 March, at the orchard at 1 Homestead Road, Templestowe, Melbourne, Melways page 22 A12. Petty's Orchard is Melbourne's oldest commercial orchard situated on the banks of the Yarra River, north east of the CBD. Each year the orchard comes alive with music and entertainment. Sample from 200 apple varieties, take a guided tour through the historic orchard, get information on organic gardening or farming, permaculture, horticulture and much more. For more details phone (03) 9431 3657, or fax 9431 3426; website: <www.yarraorganics.com.au>.

Dozers Go Slow In Rogue Land Clearing States

Campaigning by Australian environment groups to control land clearing has borne fruit. A series of announcements in late 2003 brought great hope that clearing — the worst threat to nature in Australia — will finally be brought under control. In NSW the Carr Government put through new strong legislation in December 2003 to stop large scale clearing of mature bushland. Funding is provided to assist farmers with conservation work.

In Queensland, the State with the worst land clearing in the nation, Premier Peter Beattie has put a moratorium on new permits and promised decisive action to stop large scale clearing this year. And in the Northern Territory there is now a moratorium in place on more clearing permits for the Daly River catchment. Clearing threatened the Daly River — a mighty river with

exceptional species diversity. A community process will now consider what is appropriate development in the Daly region. If successfully put in place these combined actions will protect tens of millions of hectares of native forests and woodlands and finally rein in the threat of bulldozers clearing bushland through mainland Australia.



Festival For Men

For the past 18 years there has been a festival for men at the Minto Bush Camp in New South Wales. It is a place to unwind and talk about the issues in their lives. During 2004 there will be three weekend gatherings that try to capture the spirit and feelings of the festival but within a shorter period. The dates for these gatherings are 23 to 25 April, 16 to 18 July and 8 to 10 October. The festival for 2005 will be held over the week of 16 to 23 January. Contact Peter Shalless on (02) 9603-2260, or mobile 0428-176-203 for more details.

Mountain Gorillas Comeback

After years in which they were poached almost to extinction, the number of mountain gorillas in central Africa appears to be rising. The first survey of the apes in 15 years showed that despite wars, poachers and human encroachment on their habitats, populations of mountain gorillas in a range of volcanoes straddling the borders of Rwanda, Uganda and the Democratic Republic of Congo have grown from 324 in 1989 to 380. Numbers are still critically low but wildlife officials are delighted by the results of the survey. A series of conflicts in the region — chiefly civil war in the Democratic Republic and genocide in Rwanda — has made it impossible to count numbers since 1989. The census was conducted late last year by wildlife officials who criss-

crossed the region searching for the dung and trampled vegetation that mark a gorilla trail.

Crookwell Garden & Market Days

Experience the beauty of a cold climate autumn plus enjoy the atmosphere of 'The Garden Lovers market' at Crookwell Showgrounds, west of Bowral in New South Wales. On 17 and 18 April, 2004 many of the Crookwell Shire's beautiful gardens will be open to the public. This year, 'The Garden Lovers Market' will add to the already popular weekend. For further information phone (02) 4832 0177 or visit the website: <www.stallholders.com.au/crookwell.htm>

Digger Strikes Gold In Court

A gold digger accused of prospecting illegally on public land has hit the jackpot with a court win over the Victorian Government. The Department of Sustainability and Environment issued Nick Dubuc-Timson with a miner's right — and then arrested him for prospecting near a timber harvesting site. Mr Dubuc-Timson, of Blackwood, was charged while looking for gold at a disused mine in the Wombat State Forest in 2002. A departmental officer told the long-time prospector he was trespassing, even though he held a miner's licence. A magistrate this week dismissed four charges against Mr Dubuc-Timson, ruling the Government could not stop genuine prospectors from accessing public land.

Magistrate, Jennifer Bowles, found conflicting laws meant those holding a miner's licence had as much right as the logging industry to be on the land. But the decision has raised concerns anti-logging campaigners will buy the \$19 miner's licences to



legally stage protests on logging sites. Defence lawyer James Catlin said: "This decision puts real constraints on the power of departmental officers to kick people out of logging coupes". The Government said it was considering an appeal but would look at closing the loophole.

Mr Dubuc-Timson, 34, said he was shocked when he was told during a fun day he had organised for friends and family he was trespassing on one of his favourite gold-hunting sites. He said he felt vindicated by the court decision, but feared for the future of his hobby if laws were changed to restrict miners. He said prospecting was a way of life and "to be restricted in my movements in the forest would be horrific".

Organic Agriculture Award

The Organic Agriculture Association Inc has won an Australiawide award for its TAFE accredited Organic Agricultural Systems course. The award for the best organic education project was announced at the Organic Federation of Australia's conference held recently in Adelaide. The award gives recognition to the Organic Agriculture Association's 20 year commitment to the organic industry in Australia.

Alan Broughton, author and lecturer in the course in Bairnsdale, Victoria, said: "This was the first time organic agriculture has been offered at diploma level in Australia. The course has been offered over the past three years in Bairnsdale and in the past 12 months at Drouin with over 100 students having enrolled in that time. The course has been run in conjunction with the Northern Melbourne Institute of TAFE and the demand for organic agriculture training is increasing."

Included in the course are such units as soil fertility, animal and plant health, whole farm planning, land management, marketing, pest, weed and disease management, planning of crop production, organic certification and conversion, and promoting change in agriculture.

Students can undertake full time study of this nationally accredited course or as flexible learning allowing farmers to participate in single units.

Enquiries for this award winning course can be directed to the Organic Agriculture Association Inc, PO Box 1263, Bairnsdale, 3875, or telephone the Organic Resource Centre on (03) 5152 2276.

Help Establish National Park

The Goulburn Valley Environment Group would like support in their campaign to establish a Barmah-Millewa National Park, jointly managed with the Yorta Yorta nation. This has been the ambition of GVEG since its formation in 1990 and they believe the time is now right. The Living Murray process has identified Barmah-Millewa as one of the six icon sites along the Murray River. The MDBC Ministerial Council has just announced the allocation of 500 GL/year of water for environmental flows in the Murray River. The State Government has made a commitment to a public land use review of all river red gum forests in Victoria, and a coalition of environmental groups, reconciliation groups and the Yorta Yorta nation has been established nationally to try to achieve a Barmah-Millewa National Park. In order to achieve this vision, however, GVEG need the support of more people in the community speaking out in support of the proposed national park, and they need funding to help run the campaign. Doug Robinson, newly elected President of The Goulburn Valley Environment Group Inc. is encouraging membership to GVEG or requesting donations to the group. Donations over \$2 are tax deductible and their use is administered by a separate Public Fund Management Committee. Contact GVEG at PO Box 2073, Shepparton, Victoria, 3632, phone or fax (03) 5831 7794, or email: <gveg@shepparton.net.au>.

New Farmers' Market Launched

A Farmers' market will be held in Talbot in western Victoria, on the third Sunday of every month beginning 21 March from 10:00 am to 2:00 pm. This is a community-led initiative which aims to promote fresh food and healthy living as well as supporting local small business. The main street of Talbot will be closed for the duration of the market and a band will entertain visitors and stallholders. The Market Committee are looking for small producers from Mt Alexander Shire to Ballarat to the Pyrenees. Stallholders of fresh and value-added produce must also be involved in its production to help promote greater understanding of the food and how to use and store it. For information, promotion advice, and so on contact Tiffany Titshall, Talbot Farmers' Market Committee on (03) 5464 7272, or email: <tiffmia@iprimus.com.au>.

Support For Plastic Bags Levy

A great majority of submissions to the Senate inquiry into plastic bags has supported proposed legislation by Senator Bob Brown and Independent MP Peter Andren to put a 25 cent levy on plastic bags, as a concrete way to slash Australia's 6.8 billion bag per year habit. Despite this, the ALP/Liberal-dominated Senate Standing Committee on Environment, Communications, Information Technology and the Arts Committee report recommended the bill be opposed.

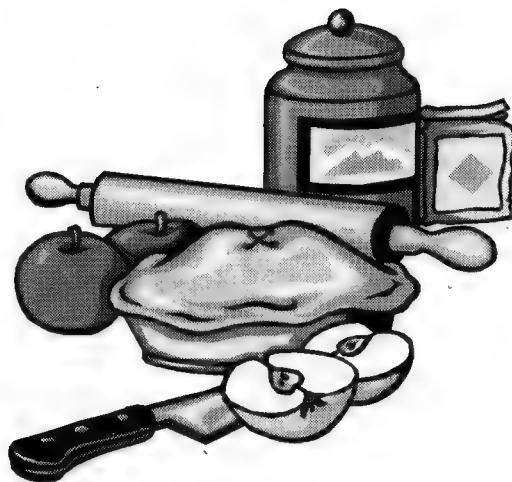
"92 per cent (more than 250) submissions to the Senate inquiry supported a levy. Only 4 per cent (11 submissions) were opposed," Senator Brown said. "The Australian community overwhelming wants to see concrete action to stop the proliferation of plastic bags. According to research conducted for Planet Ark by Roy Morgan nearly 80 per cent of Australians support a 25 cent levy on plastic bags. The Irish experience demonstrates that the plastic bags levy works. Ireland is using 90 per cent fewer plastic bags at supermarket checkouts. A huge range of marine life is particularly susceptible to the dangers of plastic bags. Evidence was presented to the committee featuring a rare Bryde's whale which died as a result of ingestion of marine debris near Cairns. An autopsy found nearly six square metres of marine debris that was dominated by plastic materials inside the whale. Unfortunately Labor and the Liberals are totally at odds with public support for a levy and have flopped at the opportunity to get behind the idea."

"They are leaving it to the big supermarkets like Coles and Woolworths to voluntarily get a 90 per cent reduction in plastic bags entering the environment, knowing that this option has failed worldwide," Senator Brown said.



Homemade Haybox Cooker

Make your own haybox cooker and you'll save heaps on fuel costs as you rediscover the art of slow cooking using an insulated box instead of gas, wood or electricity.



by **Jill Redwood**
Goongerah, Victoria.

A HAYBOX cooker is just a giant thermos. The original model was nothing more than a very well insulated box that could snugly fit a pot for slow even cooking — a bit like a crock pot. You can buy the fancy post-old-fashioned models with shiny stainless housing or you can make your own with a rustic wooden box and other cheap materials. The slow cooking makes flavours in a stew, casserole or soup mellow and mingle. As you only need to bring the pot to the boil, it also saves fuel.

Materials

The first ingredient you need to make a haybox cooker is a good looking box. As it's part of the kitchen furniture, mine also doubles as a small seat. It came from that place of endless treasures — the tip. It's an old solid box about two foot (60 cm) square and didn't have a lid, but that was easy to bang together out of weathered wood to give it the right look. Any sized box will do depending on the size of the pot you want to cook in and how much space you have in the kitchen, verandah or wherever it ends up living.

I use a three to four litre pot in mine and it seems to be the right size for the box with plenty of room for the straw insulation. There needs to be about a hand's width of straw all the way around between pot and box sides, and the top and bottom. Before stuffing it full of heat insulating material, I drilled two holes on both sides. Old rope was stuck through

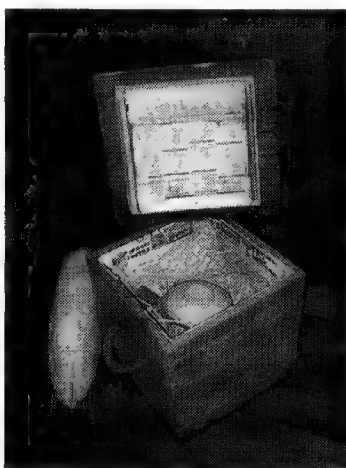
and knotted inside to make a couple of handles (see photo).

Rightio — after finding a good looking, roomy box (well, I guess if you can't find or make one, a solid cardboard box might do but it could need a little more effort on the insulation and won't be as robust), neatly line it with umpteen layers of newspaper all around, bottom and sides. It should be fairly thick and can be stapled in place. Cover the inside of the lid as well. If you want to use a bit of modern technology, line it with insulating foil as well. Next — find some straw or rough hay, even slashed dry sword grass or thick reeds might do the job. The fibrous insulation needs to be well packed in and solid. Put about a three inch (75 mm) layer on the bottom of the box, place your pot on this and then pack the rest of the material around it as solidly as you can. There should be about a three inch (75 mm) layer of straw, hay or reeds around it, but the more the merrier.

Stop stuffing when it gets to within three or four inches (75 to 100 mm) of the top. The top of the pot shouldn't be above this height. Lift the pot out and there should be a neat hole left without the material caving in. Next, stuff solid an old cushion cover or pillowcase with straw material that will fit neatly on top of this. Squash it flat to fit over the pot and under the wooden lid. It's important the top of the box is especially well insulated, as that's where the heat will want to escape.

The lid fits back down over this lot and seals in the heat.

Another useful find I had was a clay cooking pot from an op shop that also fits into the hole and seems to hold the heat better than metal. A deeper casserole dish



Your haybox cooker needs to be neatly lined with layers of newspaper all around, bottom and sides.

or cast iron pot might be as good, but a metal pot is fine. Make sure the cooking container is hot to start with, or the food will be less than boiling when you put it in its straw nest.

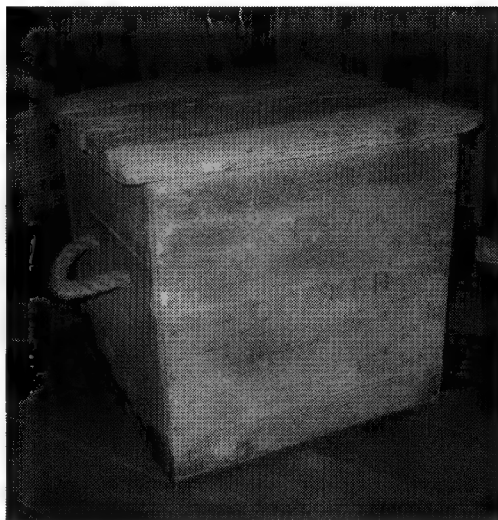
Cooking

To cook a meal, heat the brew, stew, soup or porridge until just boiling and then nestle it into the haybox. Porridge will cook in an hour or overnight but it needs a little stir and a tiny heat-up in the morning to get it steaming hot again. I cut vegetables into squares no bigger than my thumbnail to make sure they cook well. They cook easily and the pot can still be at 130°C after four hours. After eight hours though it drops to about 110°C and could need a gentle heating before it's served. But the flavours have mingled nicely.

Rice, barley or lentils cook in about one to two hours (depending on your cooker and the pot). Beans take much longer, especially the larger beans but it's a good way to start them off before normal cooking. Noodles can turn to mush depending on the type, unless you throw them into a good hot pot of minestrone or whatever, a half hour before serving. As every haybox will be slightly different, you'll just have to experiment.

I've also used the insulated box to make yoghurt or keep an orphaned chicken warm. I reckon it could be used to keep things cool for a few days as well, a bit like an esky. That's all an icebox was — a well insulated box with a big block of ice on top. You could freeze a plastic container of water in the neighbour's fridge and make a suitably sized haybox cooler or even dig one into the ground. Use your imagination to come up with variations on this theme of insulation. You could even experiment with wool or felting, papier maché, an old doona or anything that insulates well. But remember, many air pockets are the secret to a good insulating effect. That's why paper and straw are so effective.

Experiment with different pots, recipes, times and temperatures. Like a wood stove, each one will be



Jill's haybox cooker came from the tip and is part of the kitchen furniture, so it also doubles as a small seat.

different and you need to get familiar with yours. Once you have a fair repertoire of haybox recipes, using it will become part of the daily routine. Who needs electric gadgets?!



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Confessions of a Weekend Hippy

— Part Three —



On weekdays she inhabits a windowless office in Melbourne's corporate badlands. On weekends she's an Earth-loving, vegie-growing, wildlife-watching greenie in a forested area of central Victoria. Now, in the third instalment of a four-part series, these are the true confessions of a weekend hippy . . .

by **Liz Ingham**
Yarraville, Victoria.

I'M writing this by lamp light on a warm summer evening. The night air pulses with life and the Milky Way looks like someone spilled a bucket of stars. Summer holidays stretch before and behind me. After a long year juggling my city and country lives I've finally let my inner hippy off the leash, and it's scampering around, sniffing the air and making mudbricks.

Big thoughts

Summer is a good time to have big thoughts. Problem is, most of them evaporate. On hot days it can push above 45 degrees here, and even the candles flop around. I waste the longed-for long days flaked out on the verandah with my mind wide open. Today I took notes . . .

Zucchini meditation

I was looking at the zucchinis, in that vague way you get when zucchinis are a familiar sight and a grey shrike-thrush is in full song. We've made a few mudbricks lately. Thick, heavy, clay bricks, clay and straw, light earth 'muesli' with sawdust and mud slurry. I was turning over in my mind the studio I'd like to build, how to dig the mud, mix it, move it to the site, whether to pay a builder now or a chiropractor later. Then suddenly it hit me. Zucchinis have it all sorted out.

Each seed I planted in spring is building the perfect

structure for its needs. It uses the materials at hand — soil, compost, sunlight, water. It mines minerals without turning over the soil and manufactures on-site. It makes leaves that double as a solar collector, water pump and shade house. It holds them on hollow stems that give strong, light-weight support, and positions them so rain is collected and funnelled inwards. It allows entry to pollinating insects, which it rewards with food, but somehow keeps out wallabies. In feeding us, it persuades us to plant and nurture the next generation of its seeds. At the end of its life, the whole structure breaks down and creates no waste.

Bull ants

Next I turned my head to look at a bull ant nest near the house. We now cross seven nest entrances walking from the shed to the front door. Mostly I don't notice them. Sometimes one will crawl over my foot then run off when I move. We've never been bitten. They live and let live. Sometimes I come over all Edward O Wilson and marvel at them. Like the time they carried all their eggs up the verandah posts. The next day we got six weeks' worth of rain in one dump.

But when visitors come to stay, I see it from their point of view. We're a couple of weirdos who sleep outside next to a bull ant nest. But what else can we do? Destroy the nest? If there's one thing I've learned out here, it's that every action has consequences. For

example putting up a rain gauge without a wire cover drowned a lesser long-eared bat. After that, the mozzie population rose by exactly one bat's worth



and we put up six bat boxes to make amends.

Bull ants are our allies against the termites. They clean up our crumbs under the verandah, so we don't have mice. If we kill the nest, we destroy thousands of native creatures that haven't done us a scrap of harm, other than making us look like weirdos to visitors. So they're staying. Mind you, if the roof of their nest crumbles under my feet one night and they carry me off to their larder, please don't leave me there.

Food garden

Summer's end is a good time in the vegie patch. The autumn harvest is on its way, but I don't need to boil up the Vacola just yet. There's much to be grateful for. Salad every day. Tomatoes that zing the inside of your mouth. Four types of basil. Six types of beans. Potatoes crisp as apples. The Peace Garden. Peppermint for tea. Borage for courage. Brilliant plants from my neighbour Beth, like locally adapted lettuce seed, tree onions and perpetual leeks.

In my first Confession (EG 125), I wrote about experimenting with ways to prevent gum-tree roots invading the vegie patch from below the raised beds. Since then, we've tried wads of overlapping newspapers, plastic sheeting, a trench around the Big Tank Orchard and expensive root-barrier fabric. Well, the fabric was useless. The trenches either don't work or aren't deep enough. But I'm sorry to say the plastic sheeting works. Effectively, those beds are giant containers, with drainage from poking the plastic under the downhill edge. Not grouse, but the alternative is having all my little beetroots strangled in their beds. I'd be interested to hear if anyone has successfully gardened under gum trees.

We've had a few successful experiments. One idea came from tinkering with old oil tanks we found behind a shed. When I was a kid, oil heaters were all the rage and every other house had an oil tank. A few years and one oil crisis later, they're in every junk heap in the land. Ours were rusty but smelled alright. Two still had pipe fittings



After a month in the country surrounded by bushland scenes like this, Liz had trouble adapting to city life again.

on the bottom. So we stood them on bricks and connected up some old hose and a battery operated timer. The timers cost about \$25 and run on batteries I can recharge in the solar torch. They come on when we're not here during the week and drip a few buckets of water on the tomatoes and zucchinis. This has completely cured the blossom-end rot on the tomatoes (caused by the weekly wet/dry watering regime) and has doubled the zucchini harvest. We simply refill the tank when we water each weekend. An added bonus is that frogs have moved in to the garden beds in huge numbers. I watched them come out the other evening when the drippers switched on.

Back to the big smoke

After a month in the country, I'll need some help adapting to city life again. Perhaps I could put some handy little sticky-note reminders about the place. One on the bike saying: "The horrible smell is the air". One on the front door that warns: "Going outside? Remember to wear clothes". And on my lunch box: "Pretend your mung beans are retro-chic". I'll let you know how I get on.

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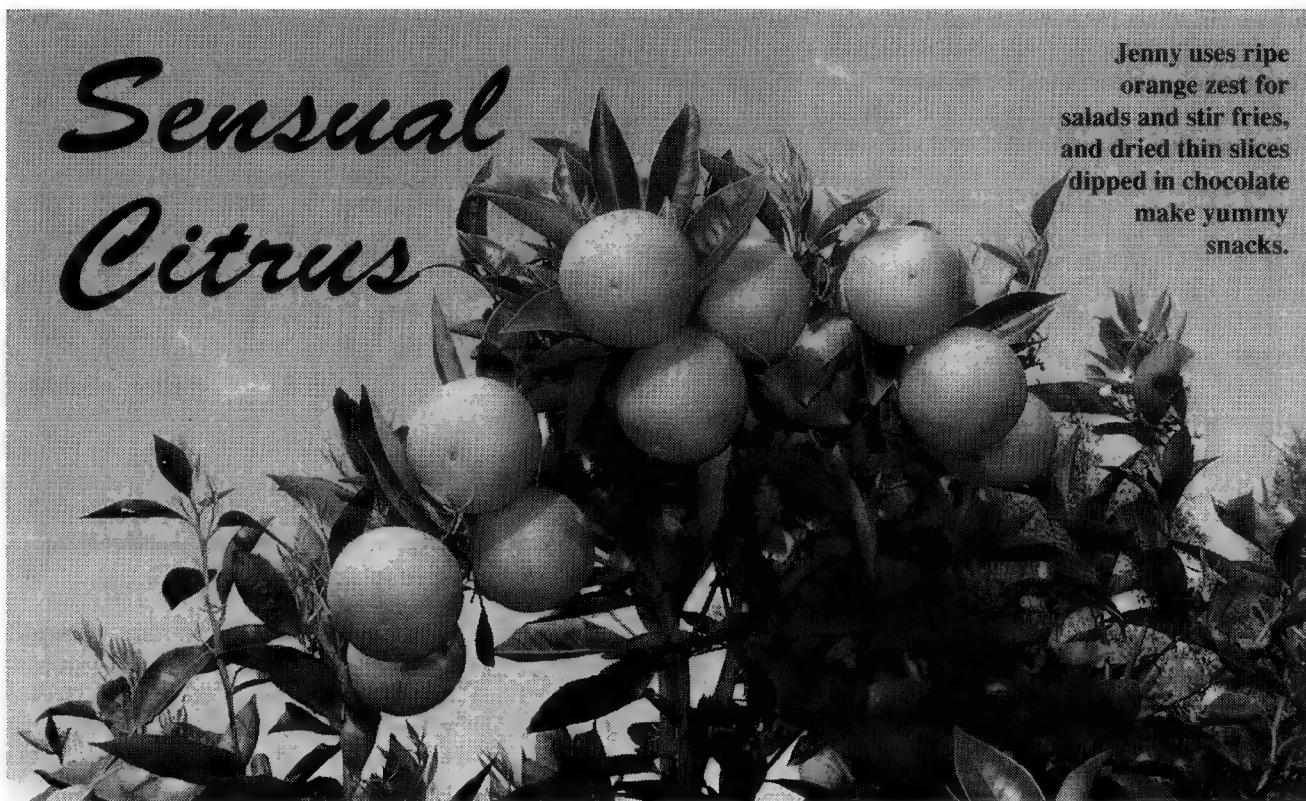
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Sensual Citrus

Jenny uses ripe orange zest for salads and stir fries, and dried thin slices dipped in chocolate make yummy snacks.



This celebration of citrus starts with a simple navel orange tree, but leads from excited taste buds to fire lighters and fertiliser.

by Jenny Allen*
Maleny, Queensland.

WHEN the Thai woman in our village, Satira, sees me walking towards her in the street she says she starts salivating. It's because she doesn't see me at all — rather she visualises an enormous, juicy pumelo. She's a passionate pumelo eater, and I'm her major supplier. I feel honoured by the mistaken identity.

Pumelos look like a grapefruit grafted with a basketball, but taste better than both. Satira is a gifted cook and makes a luscious pumelo salad, mixing the flesh with garlic, finely chopped lemon grass, chilli, sugar and fish sauce (or substitutes salt). See the recipe on page 16.

Pumelos are just one of the exciting and wide range of citrus. Citrus are the world's most popular fruit, probably not just a passing fad as they've been eaten for the last 5,000 years. The reason citrus are so popular is that there are not only lots of species, such as tangeloes, lemonade fruit, lime, lemon, Kumquat, orange, grapefruit, mandarin, but also many creative ways to use them. Also, different species and varieties can be grown in a wide range of climates and micro-climates, giving fruit over a long period. And unlike the overwhelming glut of stone fruit, you can often store citrus in nature's own depot — on the tree.

The practicalities of growing all the types of citrus can be found in good fruit tree books. *The Complete Book of Growing Fruit in Australia*, by Louis Glowinski, is excellent and can be taken to bed like a zesty novel.

I want to highlight the more lavish side of citrus. To select just one tree and show how by stretching the imagination it gives us so much — enlivening all the senses — taste, touch, smell, sight and at a stretch — even hearing (and I'm not talking about the whirr of the juicer . . .).

Let's take our navel orange tree

Our navel orange tree grows on our dam wall, alongside a range of other citrus trees. We sited it here so that it faces north, drains well and enjoys the warmer micro-climate near the water. And as it's along a major pathway we continually walk past it and enjoy it, beginning with the flowering season. For about three weeks the dam wall becomes Aroma Alley and a hive of activity for buzzing bees. With such an abundance of flowers we don't feel guilty making orange blossom tea.

Then the drongos move in. Such a derogatory word for beautiful black birds whose breasts sparkle with iridescent blue. Even more derogatory considering it takes on a job that few creatures have mastered: eating the citrus stinkbugs. We've set up podiums near the citrus, for the

drongos to sit on and sing “grut grut cris grut” before darting in for a feed.

Then autumn arrives and the garden can look a bit dull, but for one thing. The oranges start to orange, reflecting balls of colour in the water and brightening up the cold days.

*“It is a clear and brisk May morning;
filtered light stretches through in golden
shafts. The orange tree swells its sunshine
orbs with sweet nectar. Immediately next to
it the mulberry tree has begun to hibernate.
Its leaves are shrivelling, brown and brittle.
Its life is now a rehearsal for death. These
two trees are responding to the one season .
... nature balancing opposites. In a similar
way we strive to balance the ideal and the
practical; the ends and the means; paradise
and the carting of mulch to create it.*

*Today I will follow the path of the
orange tree.*

— From ‘Paradise In Your Garden: Smart
Permaculture Design’ by Jenny Allen.

Now it’s time for fun, harvesting globes. Many of ours self-harvest — as our path below catches tumbling fruit. The fruit make great balls for a gentle game of bowls, before the gastronomic journey begins.

Starting from the outside we use the zest for salads and stir fries. Next is my favourite. We cut four thin slices from the middle of the oranges and dry these, then dip them in chocolate. It’s a terrific combination, reminding me of jaffas. And they’re great snacks, except for one thing — they don’t last long.



PERMACULTURE DESIGN COURSES

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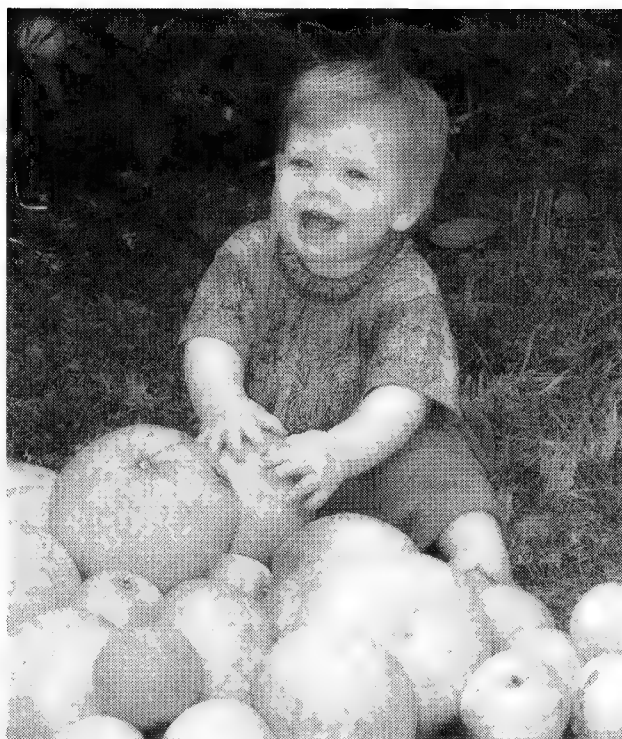
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Pumelos look like a grapefruit grafted with a
basketball but, as Jenny’s son Ziggy knows, they taste
better than both.

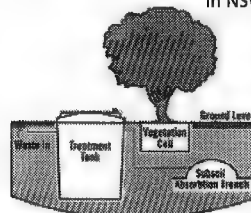
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Once the slices have been cut we are left with the ends — small cups of citrus — ideal for juicing. For a drink we mix the juice with tamarillo; making a tamarillo sunrise. We also like to use the juice in our meals. My partner, Dean, conjures up a watercress, cashew and orange soup. Initially I tried it out of charity, but now I love it. And it works well for us as the watercress and navels are booming at the same time, making an easy meal.

Watercress, cashew and orange soup

- 1 large onion, chopped
- 3/4 tbsp olive oil
- 2 handfuls of watercress — large stalks removed
- grated rind and juice of one and a half oranges
- 1 vegetable cube stock (or substitute real vegie stock)
- 1 cup cashews
- 1 tsp cornflour
- salt and ground black pepper
- a splash of yogurt to garnish
- orange wedges to squeeze and garnish.

Fry the onion in a large saucepan until limp. Add the watercress and cook until soft — about six minutes. Add the orange rind and juice. Dissolve the stock cube in one cup of water and add to the pan. Cover and simmer for 10 to 15 minutes. Transfer the soup mix to a

blender and add two cups of water and the cashews. Blend thoroughly. Return to the pan. Mix the cornflour with some water and add to the pan. Bring the soup gently back to the boil, stirring until slightly thickened. Add the seasoning and serve the soup with a splash of yogurt and an orange wedge to be eaten with it or squeezed in at the last moment.

Orange skin

So all we have left now is the skin — and we wouldn't like to see it go to waste. So we dry it on the Hot Drum wood heater and it exudes a delicious orange aroma, cheering up the winter nights. The dried skins are oil-rich, making great fire starters for another night — and once again filling the room with an enchanting smell.

By then you think we would have finished with the orange. But not quite yet. We collect the ash from the wood heater and spread it around the base of the citrus tree. The tree needs the potassium to help form its fruit, and the orange's life begins all over again.

Satira's Thai pumelo salad

Remove the skin, pith and pips of pumelo and break up the pulp to bite size — about two cups of pulp are needed for this recipe.

- 2 cups pumelo pulp
- 3 cloves of garlic — cut finely
- 2 birds eye chillies — cut finely (these may not suit everyone!)
- 1 tbsp sugar
- 1 tbsp fish sauce (or salt to taste)
- 1/4 cup finely chopped lemon grass.

And mix all together. If you have a sour pumelo variety this recipe will make it more tasty. Although, if it is sour, try leaving it for a month or two — until it shrivels up and looks almost inedible. This is the best time to eat it, and it's easier to skin.

**Author of Paradise In Your Garden — Smart Permaculture Design.*

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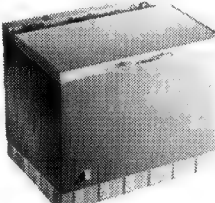
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in praise of the glass jar



 A most wondrous invention was glass

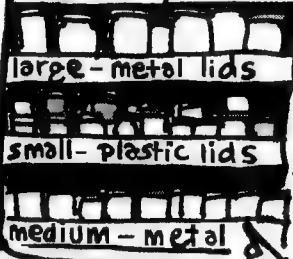


primitive people would have worshipped a see-through water-tight container



but today we throw them out by the truck loads

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Use some jars? Both?

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for less gastronomic functions ...



use as a fly trap

yukky smelly stuff

or in the garden as a bird-proof + rain-proof snail + slug culling contraption.



MAVIS?



Permaculture



in Hindsight



This issue our long-standing permaculture writer, Bruce Hedge of Newham in Victoria (email: bahedge@bigpond.com) looks at battling the cockies, gardening wwoofers, and the value of fluoro light bulbs.

THE dreaded noise began at 5:30 am on 15 January. I'd been waiting for it. The raucous, blaring, squawking, jeering of a century of sulphur crested, descending from an azure sky. Straight towards my apples and nashis. The annual onslaught had begun!

Aaarh, but I was ready for 'em this year. After last year's almost total annihilation of my crop, I was determined to get at least some of my hard earned fruit, and this year's crop promised so much after a couple of very lean, drought years.

Alice and I had toured the property a fortnight before, admiring the fruit set this year, including many fruiting for the first time. What did a homegrown Braeburn taste like? Or a Nickajack? Would Splendour live up to her reputation? And what about Priam? We chatted about the daunting task of netting some of the rather large trees, but then I had the thought that 30 per cent of something is much better than 100 per cent of nothing. With that in mind, we set to, wielding pruning saw and tree loppers with great finesse, delicately, and not-so-delicately reducing the size of selected trees so that a standard 4.7 metre wide net would drape across the remaining branches. It would then be secured by clothes pegs or number 8 fencing wire 'tent pegs' to the ground. Alice used her dress-making skills to loop the nets over, under, and around trees and branches, sometimes making a skirt, other times a sleeve. This netting is available from one of the Australiawide hardware chains for \$2 per metre, and it seemed cheap, reusable protection for my babies.

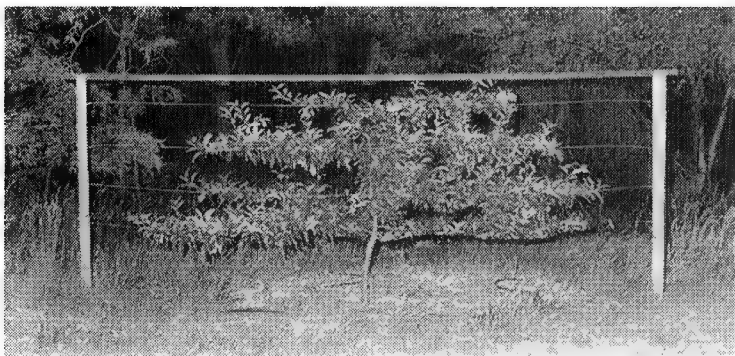
But the best and most satisfying sight was an espaliered Royal Gala I'd taken under my wing to protect. Four years ago I'd grafted a scion of Royal Gala on to a wild seedling, growing strongly near the dam, and it grew and set fruit profusely. Last winter I trained it into a four metre wide espalier and kept it to two metres high. The net draped beautifully over the whole structure, and I felt very superior, having created an easily removable protection for my pet tree. We now have 20 trees or branches protected against the Ghengis Khans of the bird world and I'm quite happy for the cockies, galahs, and rosellas to have the rest of my crop. Most wwoofers (Willing Workers On Organic

Farms) love the Australian birdlife, but we're now confident that we'll have enough apples and nashis for a March wwoofer to help gather, eat, freeze, dry, and juice the fruit for winter. I have seen some properties with the most wonderful caged gardens and orchards in bushland, and of course they work, but you have to concentrate all your food production in one area to do this, and we hadn't done this from the start. So this is the next best thing. I will be espaliering many more trees next year.



Wwoofers

Speaking of wwoofers, we had the most wonderful 'gardening' wwoofer, Naomi, come in November, and she simply planted the whole main garden for summer. I'd prepared the soil reasonably well, but it was just wonderful to let her loose to 'do her own thing'. We gave her the seeds and said: "Go to it — it's all yours!"



Bruce will be espaliering many more trees next year.

I think she was quite pleased to have that freedom, and we are all benefiting greatly from her efforts. It is a wonderful gift to have someone come and give all that potential food. Among the cornucopia, if you'll pardon the pun, we have the best corn patch ever, and I know I'd never have got around to putting it in myself! A most interesting observation has come from that patch. Naomi planted climbing beans among the corn a few days later (I said she was a gardener!). They are all growing beautifully together, now nearly two metres high, but all the beans are curling up the corn in exactly the same anti-clockwise direction (looking from above). Does this happen in the Northern Hemisphere? Or do they go clockwise? If so, what happens at the Equator?

Enlightening

And now for something completely different, as they say. A light bulb blew in our house the other day. It was one of those compact fluorescent bulbs, which are claimed to use a lot less electricity, and last much longer. You know the ones I mean. I had written the date of installation and price next to it on the ceiling, at the time, because I was interested to test the claims.

Well, the results are most enlightening (sorry!). The bulb was used in the passage as a night light, and a

fairly accurate estimation of its usage would be ten hours per day. More in winter, less in summer. But sufficiently accurate for the test. The bulb lasted almost exactly five years, and had cost fifteen dollars in 1998. Approximately 1800 days, ten hours a day, equals 18,000 hours. Over twice what they claim. Pleasantly surprising.

But now it gets interesting. The light output was equivalent to 75 watts, but the claim is they burn only eleven watts. Let's accept this. Eighteen thousand hours at 11 watts is 198 kilowatthours of electricity burnt. At 13 cents per kilowatthour, the cost of that light being on for the five years of evenings is about \$26. Add the \$15 capital cost, and we get \$41 for five year's light. Now, we calculate the cost of a 75 watt lamp being on for the same time, and it comes out to about \$175 plus a couple of replacements at a dollar each, and it makes for a very interesting comparison!

Some thoughts come to mind. Do they really burn only 11 watts? Do I need a 75 watt night light? No, a 25 watt one will do, but still the sums mean that compact fluoros *are* cost effective. Interestingly, the replacement 11 watt bulb cost \$8, and I'm going to be very interested to know how long it will last. I'll keep ya posted.

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Season by Season

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The Joy of Boomerangs (and how to get well and truly bigger)

It's dry as I write this — cicadas yelling at 125 decibels and no water for the garden, and it looks like another season when the vegies and trees will survive or die without help from me (though it was amazing what survived with four to five months of searing heat and no rain whatsoever last season). But at least we had a glorious spring, with rain every week — enough for spectacular plant growth and flowering even if it wasn't enough to replenish springs and creeks. Which meant that the fruit crop this year has been stunning. (And also means that the wombats, wallabies and so on can live on the windfalls for months even with the grass dying.)

But, at least, having lived through three major droughts here now — and knowing trees over a hundred years old that have survived even more — I'm not as scared by the natural seasons as I used to be. It's more the human things I am frightened of. We were driving in to town last night and I noticed a whole bank of eucalypts dying and immediately thought, hey, drought. But when I looked more closely some of the leaves were half green, half brown, which didn't look like drought.

Then Bryan said, "It looks like spray drift," and the penny — or the barrel of herbicide — dropped.

Bryan was right. The broom and blackberries along the creek above us were sprayed from a helicopter with Grazon. Now trees in the village gardens and eucalypt trees more than 150 metres from the designated sprayed area are dying, and our creek is a strange, almost glowing brown — something I have never seen in 30 years of watching it, filled with residues of dead plant, algal and other material.

We have been washing in the water; swam in it when the residues would have been at their height — and the two little kids next door washed in it and drank it . . . and at this stage my mind shuts down, and I don't even want to think of the skin rash I developed, or the seedlings I watered that died, the stored water that may be contaminated, so even in this time of drought it can't be used, or . . . no, as I said, at some stage the mind just shuts down.

It's so easy to do BIG things nowadays. A bulldozer can clear a hundred acres so much faster than a man with an axe. Ride-on lawn mowers — which may be one of the hidden curses of civilisation — can turn good 'roo tucker into lawn in an hour — and then it needs to be watered to keep it green. Most of the houses around here now have great sweeping stately homes of England style lawns, all swallowing water, fertiliser, herbicide and days of people's lives. Even the big old houses 50 years ago, with their giant glorious gardens, had mostly trees and shrubs — survivors — not bloody cricket grounds.

Most people nowadays expect simple, BIG solutions, whether medical or environmental. It's easier to control burn large areas than do smallscale patchwork burns, or design houses and properties to be bushfire resistant. It's easier to take the anticholesterol drug taken by a large proportion of the Western world nowadays than go for a walk each day, or exercise while you grow your own lettuce.

It's easier to spray weeds instead of work out decent pasture management, which you would if you had to chip out the blasted weeds by hand (and if the spraying doesn't sort the problem, hey, you can do it all again next year . . . and the next . . . and the next . . .) and when weed seedlings spring up under the dead plants you can spray them too. Why bother with the hard work of re-establishing grass or trees?

Sometimes I think the world will die of being

biggered and biggered, then biggered some more.

People who move to the bush for 'lifestyle' reasons nowadays mostly expect it to be all provided for them: they pay their money and they get bush and kangaroos, clean air and water. There are more people with fat wallets too, who can buy land for investment or a dream of 'one day, maybe,' so the land lies unloved and the community withers.

I suppose what I am really saying is, how committed are you really to the place where you live? Committed enough to risk injury, or at least major discomfort, fighting a bushfire? To physically help remove weeds, control feral animals that will destroy it, plant trees? Owning land involves duties, as well as joys. Or else we're all gone to biggery.

Damn it, I'm getting maudlin. And the heart of life is still damn good, despite the spraying, not to mention a sky that hasn't had a cloud for two days, and then it was only a puny puffy thing, peering down to see what was happening in a dry world.

And while it's dry now, it was a stunning spring, even if the rain was just a 'wet the soil' type, not a deep down soaker — the sort of spring where flowers and fruit just dropped off the trees and at times it really did feel like the Garden of Eden.

Boomerangs

We had a cornucopia of good things at Christmas, partly ones I made, partly bottles of good things made from our own produce (damson jam which is a bit like the stuff in a baby's nappy, when the baby hasn't been feeling very well — but the taste is great). Loquat jam, apricot jam, apricot chutney, loganberry and lime cordial, blueberry/lemon cordial and so on or from boomerangs.

Boomerangs are the bottles of jam or jars of pickles or very nice lime tarts, thank you, that come from stuff you have given away that returns to you in a different form.

Everyone who grows lots of fruit or vegies needs a good horde of friends with kitchens who'll take baskets home and do magic things with them. (This isn't a contractual deal — not even an implied one. Wouldn't be nearly as much fun if it was a set deal — I'll give you ten bags of lemons, you give me a jar of lemon butter.)

Boomerangs are unexpected. No one expects the boxes of apricots or case of peaches, and we don't expect anything back. But it's a heck of a lot of fun when it does.

Boomerangs are a million times more rewarding than giving stuff you buy. A good boomerang is based on love and affection and an enormous amount of pleasure in growing and making and giving — and seeing your apricots — or your walnut pâté — appreciated.

This year's boomerangs so far have included melon and ginger or melon and pineapple jam (descended from our chilacayote melons), plus melon and lemon preserve, which is lumpier than jam, the sort of stuff you have to pile on or eat with a spoon. Also blueberry and plum jam,

rhubarb chutney, rhubarb and rose petal jam, lemon and mango butter, strawberries in syrup, raspberry jam . . . I would need to go and investigate the jam and pickle cupboard to remember more of them.

I've just made tiny pickled pears to do a bit of reciprocal boomeranging — based on a recipe for The Preserved Apples of Queen Elizabeth the First — except I used immature pears instead of fallen green apples — and very pretty they look too.

For this to work of course you need a community of friends who also love growing things — and cooking things — and also space to do it and keep the surplus (most new houses have vast plastic spaces but damn all space to cook — and even less to store things! If it doesn't go in the fridge, freezer or the dishwasher, why bother?). And most new houses have tiny gardens too — food is meant to be bought, not cherished.

Recipes nowadays are all for non-cooks too — exact amounts, 125 gms of this and one cup of that. Whereas dishes made from your garden can never be exact, because they are based on what is plentiful and good — and the experienced cook gardener knows what goes with what or the way vegies can be varied 3.5 million ways to make a soup or a stew or a sauce or a relish . . . and anyway those 125 gm recipes are never accurate either. If you are cooking with tomatoes as well as the obvious variations in size they'll vary in wateriness, sweetness, acidity and your recipe will vary accordingly. Flours vary in the amount of moisture they take up, dried beans may be five year old bullets or tender this year's harvest and need a twentieth of the cooking . . .

And come to think of it, you need the right sort of friends too, generous, long-term ones who are prepared to give with no thought of exchange — except the exchange is always there if the friendship is long enough . . .

Anyway, if you do have friends like this and they have kitchen and garden enough all the following crops will bear and bear and bear with little or no work — and unless it is a bad season when they won't, much. But they'll still survive.

Damsons

These are small, tart, big seeded plums, lousy for eating unless you are a parrot but make stunning jam and jelly. Better still, they are so tough skinned fruit fly mostly don't bother them. The trees shrug off drought, the flowers (here anyway) are late enough to be safe from frosts and they don't need pruning! There are a few varieties about, but mostly you'll just see them sold as 'damsons'. If you have a choice the pointy fruited ones rather than the smooth round ones have the best flavour.

Damson jelly

This also works with plums but the flavour is not as intense. Cover fruit with water. Don't bother taking the stems off or you'll be all week about it. Cook till fruit is

soft. Press through a sieve or strain through cloth (which will give a clear jelly).

Measure the juice — you need a cup of sugar for a cup of juice, though if you think you may have added too much water make that half a cup of sugar to each cup of juice. Boil till it goes glug, glug, glup like a constipated volcano and starts to spit all over the stove and your wrist. Stir often so it doesn't stick. Turn off the heat and leave overnight. If it has jellied, heat till it just boils and bottles; if it hasn't boil some more and try again. (This cooking and reboiling means that you don't overcook or undercook your jam or jelly — works a treat.)

Rhubarb

Rhubarb grows in semi-shade as well as sun; it also survives drought, frost, hail, and everything else except starving goats and cattle hooves. Try baking it: chop stems, lay in an oven dish, add a little orange juice and sprinkle with sugar. Bake 20 minutes or till soft. This way it keeps the shape and it isn't stringy.

Rhubarb and pineapple jam

- 1 kilo chopped rhubarb
- 1 kilo chopped cored pineapple
- juice of six lemons or limes
- 1 cup water
- 1 kilo sugar.

Boil all ingredients until thick and a little sets in cold water. Though the pineapple and sugar suggest a very sweet jam the lemon juice helps cut the sweetness. This jam is good in tarts or spread on hot puff pastry and served with cream.

Rhubarb and rose petal jam

- 50 grams rhubarb
- juice of three lemons
- 500 grams sugar
- 3 handfuls of deep red unsprayed rose petals with the white base cut off.

Place the chopped rhubarb in a bowl with the sugar, water and lemon juice. Leave overnight. Next add the chopped petals, simmer very gently till the sugar has dissolved, then boil until a little sets thickly in cold water. Take off the

heat, bottle and seal. This is a wonderfully coloured, deep ruby if you use red rhubarb.

Apples

Plant very early (like early Macintosh or Gravenstein) or very late (like Lady Williams or Sturmer Pippin or French Crab) apples if you want to avoid fruit fly and codling moth. Apple trees are stunningly hardy once established — if you can coax them through their first four years they'll survive for hundreds more. Apples drop in dry seasons (or if infected by fruit fly or codling moth) but these windfalls can be cooked to good effect.

The preserved apples of Queen Elizabeth I

This recipe was possibly invented to cope with windfalls — apples that fall before they are ripe enough to eat or store. Take small apples (apples were smaller in Queen Elisabeth's day). Don't peel them or core them. Place them in a saucepan and cover with sugar; cook as gently as you can till the sugar has dissolved and the apple skins have changed colour.

Boil up six cups of vinegar with a cup of honey, a sprig of rosemary and a teaspoon of allspice. Pour over the apples in bottles, seal and keep for at least two months before serving.

These can be eaten as they are. They are also good cold with cream or hot with custard or served with roast meat or a cos lettuce with no dressing, or use them like you would mustard fruits, with cold meats and so on.

A modern variation is to use sugar instead of honey, and add two cloves instead of the rosemary. I made mine this year with tiny immature pears — I peeled the pears first and simmered them in a syrup of one cup water to two cups of sugar till cooked, then cook them for ten minutes in the vinegar. They look great and taste . . . interesting. Definitely worth eating — a bit like you'd eat pickled onions, not to make a meal of, but a good savoury bite. Bottle while hot.

Crab apples

Crab apples *may* get fruit fly or codling moth, but usually don't. Again, hardy as rocks in the creek. Crabs



Rhubarb and rose petal jam is a wonderfully coloured, deep ruby if you use red rhubarb.

usually have a great taste — more pungent than the larger apples and so make great jelly and other goodies. Use as above.

Tomatoes

Tomatoes also survive drought, thank goodness, as long as they get a bit of moisture while young.

Very traditional tomato relish

Skin three kilos of very ripe tomatoes. If they are pale pink and feel like tennis balls ignore them. Make something else. Add a kilo of chopped brown onions — I mean brown, not white or Spanish. Sprinkle with some salt, mix with your hands, leave overnight then pour off the juice. Boil the tomatoes, add a kilo of brown sugar and a chopped bulb of garlic, a tablespoon of hot curry powder, a cup of white vinegar, and a tablespoon of mustard powder. When it has boiled for ten minutes thicken with two tablespoons of corn-flour mixed with a little more vinegar, stir till thick, take off the heat and add a teaspoon of cinnamon, nutmeg, white pepper, ginger and a quarter of a teaspoon of cloves. Bottle while hot.

This is as savage as a backyard bulldog when fresh but matured over three or six months is excellent with a traditional cold lamb sandwich. Actually, I find tomato relish best with fried won tons.

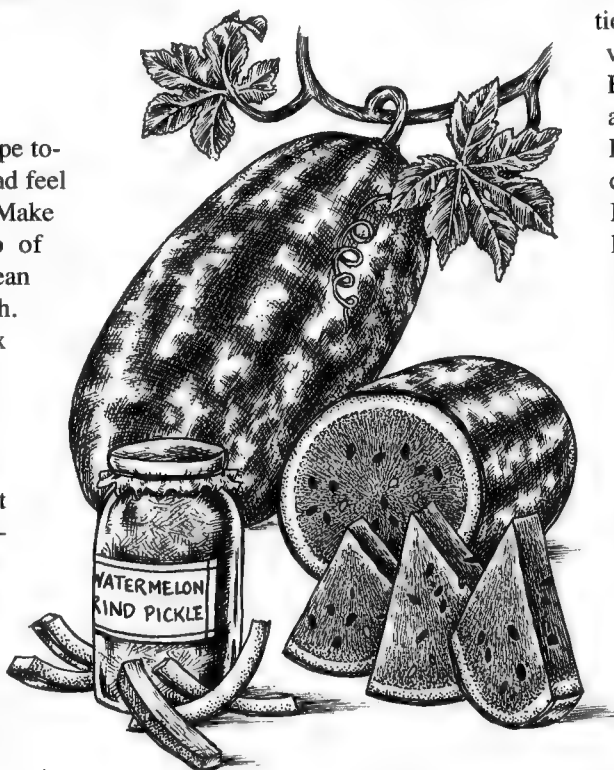
Tomato jam

Tomatoes are a fruit too and make wonderful jam. Most people assume it's plum or apricot.

1 kilo tomatoes
1 kilo sugar
grated rind of three lemons

12 finely chopped peach leaves (optional: gives a mild almond flavour).

Boil all except the sugar till soft and mushy and add the sugar. Boil until thick and a little sets in cold water — about half an hour. Bottle and seal. This is lovely — like a very dark honey, quite unlike tomato. It's good on bread or crumpets and is also good with cold meat or hot roasts.



Once watermelons get going they'll survive incredible heat and drought.

good and the texture is superb.

Watermelon

Watermelons originated as a South African desert crop — they used to be used as a way of carrying water in the desert. Once they get going they'll survive incredible heat and drought — I once harvested a couple from a vine growing in a Queensland sandhill from a picnicker's seed! Spiced watermelon rind pickle used to be a great Southern USA treat — you eat the flesh and pickle the rind. And, yes, it does taste

Spiced watermelon rind pickle

1 sliced watermelon rind
4 kilos of sugar



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- 1 litre of vinegar
- 2 tablespoons whole cloves
- 4 tablespoons cinnamon
- 3 sliced limes or lemons
- 1 teaspoon allspice.

Chop the watermelon rind into thin slices, just cover with water and simmer very gently until it is tender. Take the other ingredients and boil for ten minutes. Add the rind, without the water it was boiled in. Boil again for 20 minutes as gently as you can, bottle and seal. Keep in a cool cupboard for six months, though it can be eaten after one month.

Pumpkin

As I look out at the garden the chilacayotes are wilted, the zucchini look sad but the pumpkins are undaunted. Early settlers would plough up the creek flat, plant the seeds, go droving for five months and come back for the pumpkin crop. The pumpkins would have grown themselves. If you want a REALLY tough pumpkin — the sort that needs an axe to cut it and would survive a meteor strike — look for the old ironbark pumpkins. Great flavour too.

Pumpkin chutney

This is very good. Don't let the blandness of mashed pumpkin put you off.

- 1 kilo pumpkin
- 500 grams tomatoes
- 500 grams chopped onions
- 700 grams brown sugar
- 2 teaspoons each of black peppercorns, whole all spice, ground ginger
- 6 cloves of chopped garlic
- 1 litre of red wine vinegar.

Slice the pumpkin into thin neat pieces. Skin the tomatoes by throwing them in boiling water and slipping the loosened skins off. Add all the ingredients, then simmer — don't boil — till thick. Stir often as this chutney sticks easily.

Cumquats

Grow seedlings if you can — cumquats grow easily from seed and are more vigorous and much more hardy if they are not grafted. They will also grow enormous, to about 20 metres, but don't worry, you'll be feeding the trees not the other way around by then . . .

Chewy cumquats

- cumquats
- sugar
- water
- salt.

These are more savoury than sweet, though they are sweet

too. I was first given them at a Chinese friend's, and found it hard not to finish the jar. Prick the cumquats at least ten times each with a needle; pour a mixture of half salt and half water over them and leave overnight. Drain. Repeat for another night or even six — the longer you salt them the chewier they'll be. Put them in a pan, cover with just enough cold fresh water to cover them; simmer till tender (not mushy). Drain them.

Make a syrup of equal weights of sugar and water, boil ten minutes. Cool and add the syrup to the fruit and boil another ten minutes. Stand overnight. Add another cup of sugar for every six cups of cumquats and syrup; boil again; repeat for three more days. At the end of the week drain the cumquats, roll in caster sugar and dry on racks in the oven or the sun till the outside is crisp. Keep away from any moisture. Store in a sealed container lined with greaseproof paper. These can be eaten whole or sliced — they are very good indeed.

Kiwi fruit

Every fence should have a couple of kiwi fruit vines on it. Kiwi fruit are finicky for their first three years or so — they die if they dry out, hate wind, frosts and so on. Then suddenly they go woosh and even if you chainsaw them down they'll grow again. (We have been mowing some old vines for five years. And they still come up from the roots!) They also ripen after the fruitfly have stopped breeding!

Kiwi fruit chips

Boil two cups of sugar with half a cup of water for ten minutes. Add a cup of sliced, peeled kiwi fruit, and simmer very gently till they have absorbed most of the syrup. Place on a greased tray and dry in the oven or the hot sun till firm. Make sure no moisture touches them.

Guava

Guava need no feeding or pruning, and they survive heat and drought. Strawberry guava tolerates the cold and tastes of nothing in particular till you add sugar in this recipe and cook it. Pineapple guava I find tastes just too rich and fruity, but the added lemon really makes a difference. In other words, a great 'cheese' from indifferent fruit.

Guava cheese

Take equal weights of sugar and peeled guavas, with the juice of a lemon for every two cups of sugar. Mash the guavas, add the sugar, place in a pan without water, and stir over a low heat till the moisture clings to the spoon. Test in a saucer of cold water — if it sets it's ready. Place a thin layer in a greased dish. Cut into squares when cold. If you are going to store guava cheese dust the squares with icing sugar and wrap each one individually in greaseproof paper.

An All Purpose Stock Fence

— Part One —

Successfully building your own all-purpose stock fence is a very satisfying art to master. Vince describes here how to build a fence that can also be adapted for ponies.

by Vince Conlan

Binya, New South Wales.

THE best part about fencing is finishing. Watching it grow is satisfying, the physical exertion is invigorating but seeing it finished leaves us with a deep sense of wellbeing. Perhaps it is the feeling that comes with a job well done or the sense of symmetry in a precise line ruled across the landscape, a margin of order across the ungovernable. Or maybe it's just a statement to the neighbours, "OK piss off, this is mine."

The type of fence you build depends on your needs. Listed below is a general all-purpose stock fence. The basic components include: end assemblies, star posts, 6/90/30 Hinge Joint or Ring Lock, droppers and barbed wire. You will also need pliers; wire cutters; plain fencing wire; wire strainers; a 'fence strainer,' chain and tractor; a posthole digger; gloves; a post driver and beer when you finish (see photo below).

End assemblies

The end assemblies are the most important part of a fence and the end posts are the most important part of the 'end assembly'. They must be rigid, inflexible and able to withstand great tension. For this reason they are called 'the

strainers' and it has nothing to do with them being anal-retentive.

The end assemblies are built around triangles. You can buy them ready-made or build your own. There are two main methods of construction (see diagrams 1 and 2 on next page) and people use steel, wood or cement. I prefer to recycle so cement posts just seem to be a waste of time and money, unless of course you can get them cheap at a clearing sale or something. Most people make their own and you may buy casts to do this but why bother if you can get secondhand railway line or steel pipe cheaply or you have a good source of recycled timber available?

Unless you can get railway line very cheaply it may not be very economical and it is heavy to put into place. If you decide to use recycled wood, cypress pine is the best. Throughout the hills of Binya there are old posts from fences commissioned by the 'squatters' that are well over 100 years old. The fences are long gone but many of the cypress posts still remain as a legacy to the gangs of men who worked for almost nothing driving holes seven metres apart across hills of stone.

Creosote treated radiata pine is okay but very dirty to handle. There are also the green pine poles common in hardware shops. They're treated with Copper Chromium Arsenic, or CCA (ACQ is a lower toxicity pine treatment)



The basic components you'll need for building the fence (R-L): a fence strainer, a post driver, pliers, wire cutters, a posthole digger, wire strainers, and Vince suggests you remember that little bottle on the left for when you've finished.



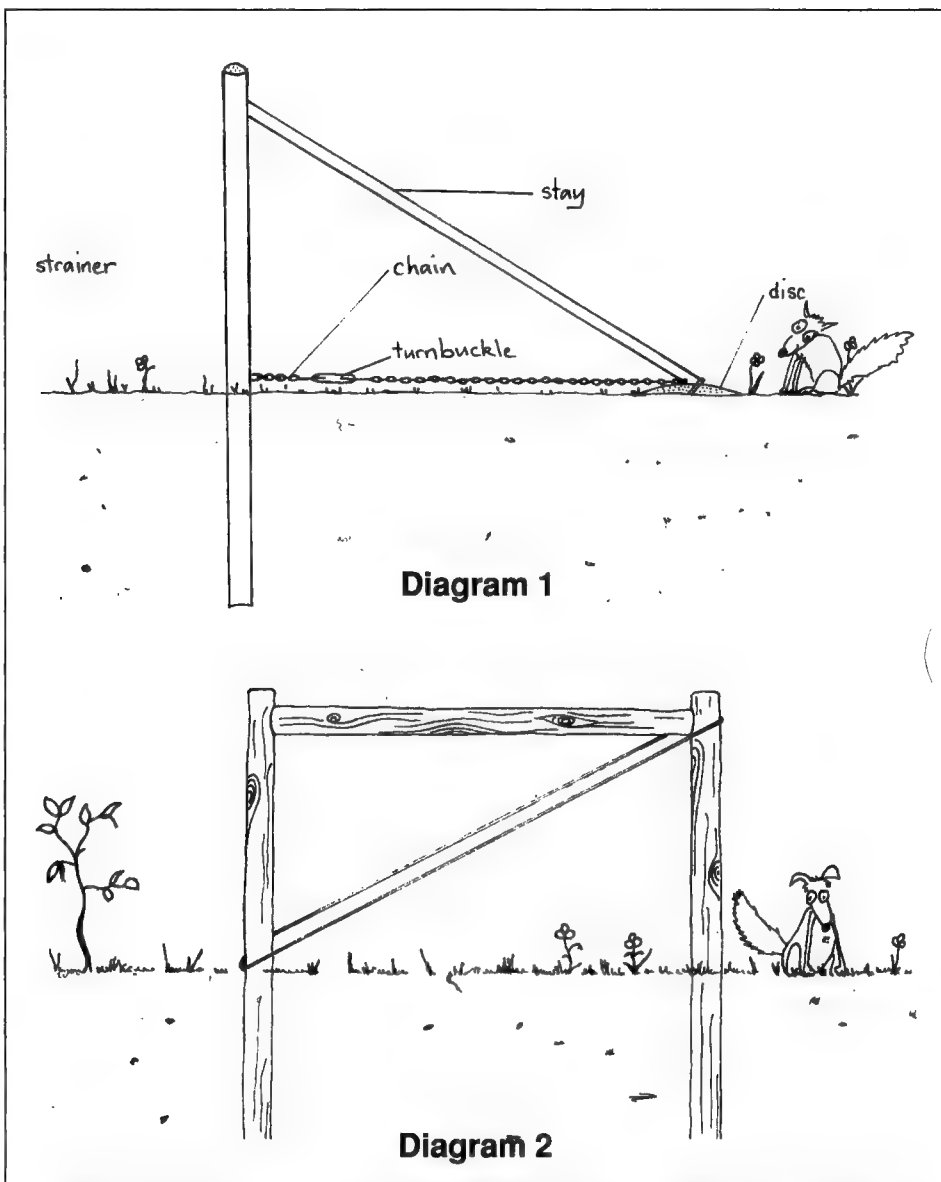
This style of fence can be adapted for ponies by replacing the barbed wire with high tensile plain wire and capping the star posts.

but these can make fine posts as well.

For the most part we use a simple triangle assembly made from secondhand pipe with about 3 mm thick casing and a 120 mm diameter. We cut this pipe into lengths of about 2.1 m (7 feet). The post is then capped with a cement plug. We jam a wad of newspaper a little way into the top so we only need a handful of cement for each post. A lug is welded 20 cm from the top and a length of chain welded 950 mm from the bottom. The lug is used to hold the stay in place.

Each stay is also cut about 2.1 m long. The pipe casing should be 3 mm and the diameter about 60 mm. At one end we weld a rod. A length of chain is either welded or looped and bolted to the rod. The rod is inserted into an old plough disc. The two pieces of chain are connected by a turnbuckle and tightened. The turnbuckle enables tension to be maintained on the post. The disc prevents the stay sinking into the ground.

When using timber, notches are cut into the post for the stay and a slab of stone driven into the base of the stay prevents it from moving. Once again we rely on the 'right angle' triangle to give our strainer posts strength.



These are the two main methods of constructing end assemblies for general stock fencing.

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It is not enough to whack a great post in the ground and hope that it will withstand the force of strained wire. That is why we include a stay. Even with a stay the strength of your fence will still depend on two things: how straight the fence is and how deep your strainer post is sunk into the ground.

For every corner in the fence a strainer is needed and a single stayed assembly is enough for most corners if you rotate the diagonal stay to bisect the angle. It is important that your fence is straight. The tautness of the wire gives the fence its strength and like anything pulled tight it will tend towards a straight line. If your fence is not straight the taut wire will simply pull your 'normal' post over. This goes for hills as well. Without a strainer at the bottom of your hill the taut wire will pluck your posts from the ground. These strainers don't need a permanent stay because the taut wire either side provides balance.

Studies show that the depth a strainer is sunk into the ground is the most important factor for its strength. The deeper the strainer, the stronger the fence. For a while we dug mammoth holes and then poured in cement to create a greater mass beneath the ground. It's a lot of effort and the assemblies are not any stronger for it. The simplest and most effective method is to use a posthole digger slightly larger than your strainer. Dig your hole about 900 mm deep.

Putting in the star posts

Once you have built your end assemblies you can start banging in the star posts. Make a post driver or buy one. This is essential. Using a hammer will hurt. Ensure that all your posts 'face' the same way. There is also a right time and a wrong time to drive in star posts. The right time is just after rain. Three to four hits will generally sink your post to the required depth. During the middle of summer, when it hasn't rained for months, is the wrong time. It will hurt. Your hands will blister and then they will bleed, regardless of how tough you are or how thick your gloves. (I think Dad believes this is character building!)

It is important to keep your fence straight. You can strain up some plain wire to do this but it gets in the way. The best way is to have someone "sight the posts," preferably someone sober and who is going to take turns banging them in. It is a good idea to mark your far strainer with a piece of bright cloth so that it is easy to see. The 'sighter' starts by looking 'down the line' and then directing the post driver. At home it generally sounds like this: "Left. Left. Left. Right a smidgen. Straighten the post. Left. Too far! RIGHT. Right just a fracTION! FfXÂ! Left. Left." And so on.

• In Part Two next issue Vince explains how to hang, strain and tie your fence.

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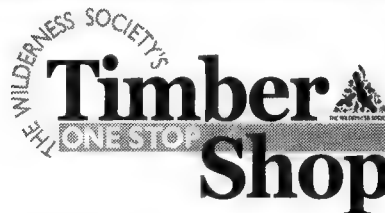
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Living In Fowl Times

by Alanna Moore

From Transylvanian Naked Necks to Araucanas — Alanna welcomes reader' queries about living with chooks. Write to Earth Garden, PO Box 2 Trentham, Vic, 3458 or email <info@earthgarden.com.au>.



Hello all you chooky lovers,

Recently I was confronted by a gruesome photo of a very sick looking chook that a reader had emailed to EG. I just hope that the problem has been resolved, because the letter went straight into my trash file. This is a quarterly magazine and I am not an expert on chook diseases, so no one should be relying on me to solve their urgent chook health problems.

I will happily give advice of a general nature, and if you do have a serious fowl health problem you will have to do a whole lot of homework, because vets are rarely equipped with sufficient interest and know-how to treat fowl in this economically rationalist world. As soon as commercial layers start to look a bit wobbly they get the chop. Of course if birds are really sick and suffering this is the right thing to do. Put them out of their misery quickly please! The kindest way is the heads off cure. (Neck wringing is not recommended, just chop it off.)

Books, such as my *Backyard Poultry – Naturally* will give many suggestions for dealing with common problems. And why not join the local poultry club and get to learn from the local experts.

How much cold protection?

Hi Alanna,

We live in outer suburban Melbourne and have just bought four brown cross-breed pullets for egg laying. We have built a fairly large run, part of which is roofed. In that, they currently have a raised wooden box, half is a nesting box and the other half has perches. But they don't seem to like roosting in there very much — they keep looking around the run for somewhere else to perch. Also, when we get more chooks it will be too small. So my question is, how much protection do the chooks need from the cold when roosting? Given that the run is in a sheltered corner, would it be sufficient to put some perches under the roofed area for them, or do they need to be more enclosed? Thanks very much, Kelly.

Dear Kelly,

Chook feathers make for very good insulation so I'm sure they will be fine sleeping out under the roof, high up, where their instinct tells them to go. Then you can convert their box to just nest boxes. If it does get a tad freezing at

times, you can always lay biscuits of straw from hay bales across the roof above them to keep them more snug. Make sure that perches are either round timber rods or natural tree branches, for their feet to grip nicely — not square timbers, which are very uncomfortable to perch on.

Which chooks?

Hello Alanna,

I am interested in buying some laying chooks for my back yard area in Sydney. What size chook house do I need for two chooks? How high? What type of chooks and how far from the house? I would appreciate your advice. Thanks, Michelle.

Dear Michelle,

For just two hens you won't need much of a set-up. I don't know how big the birds are that you envisage, but I'm sure a house of about one cubic metre would be fine. If you move it around the yard it won't get too smelly and the manure will fertilise the ground. If it's near the house you can keep an eye on them.

As for breed selection — there are ones to suit factors such as climate, laying ability, good looks, hardiness and so on. For instance the cute cuddly ones, like Chinese silkies, are great for little kids as pets, but rarely lay more than 20 eggs in a season. So talk to a poultry breeder, explain your needs and see if they have a breed that fits the bill.

Dogs with chooks

Dear Alanna,

Having read in your book *Backyard Poultry, Naturally*, about your Jack Russell, Vikki, and how good she is with chooks, we have decided to buy a Jack Russell. Our chooks, mostly white leghorns with a few Pekin bantams for chick rearing duties, spend some of their time in a chook dome but about half the year free ranging. In recent years we have had some losses to birds of prey and are hoping the dog may help guard them. Our Jack Russell, Rosie, is eight weeks old and came from a family who kept chooks. We would appreciate any tips on how to train her to guard the flock and not harass them. We have some chickens due to hatch any day now. Thanks in advance. Paul and Irene Osborn, Cooranbong, NSW.

Dear Paul and Irene,

Take Rosie out with you when you do the rounds of feeding and chook care and teach her to love and respect your chooks. When she sees the care you give them she will appreciate that they are 'family' and naturally want to guard them.

Jack Russells were bred to be hunters of rats and rabbits, not to guard specifically. You may have to really lay on the discipline to overcome natural tendencies. The flock may well be harassed in the early days. Dogs are not really adults until some two years of age, so you will have to keep an eye on her. Beware of other dogs leading her astray too, as the hunting pack mentality can resurface very easily.

The breed is highly intelligent so tell her what's happening and reward her for good behaviour. Vikki was five weeks when we got her and we made sure that she bonded with both young chicks and guinea pigs, by sharing a little box with some. She appreciated the company, but this probably wasn't reciprocated!

Duck eggs laid in water dish!

Dear Alanna,

Why does my two year old duck lay all her eggs in the water dish? She has a comfortable house and free ranging in the orchard to choose from!

Thank you, Christine Caniamo.

Dear Christine,

Does she not have a nest box? Or a dark corner with access to nesting materials? Put some 'dummy eggs' (you can buy concrete ones) in her nest to give her the idea and elevate the water bowl so she can't sit in it. Failing that a duck psychologist perhaps?

The brown ones

Hi there,

My mum wants to have a few chooks and likes 'the brown-ones'. Are these 'Isa Browns'? Are there other egg-laying 'brown' varieties? Is there any website where you can go and see a picture library of chooks and so on? Cheers, Peter.

Hi Peter,

My mind reading ability isn't always reliable, so I would take a guess and say that, yes, the Isa Browns, which were bred for high laying ability in a commercial setting — a battery cage — could be what your mum is after. Unless what she would really like is a nice old fashioned brown feathered breed that has greater intelligence and hardiness. In which case she would probably love the likes of a chunky but placid 'Aunty Jack' style Barnevelder, an old Dutch breed which lays beautiful chocolate brown eggs. Or the daintier, chestnut coloured, New Hampshire, of medium size, vigorous and fast growing.

A 'Google' search would no doubt get you to a website. The British Poultry Standards book has very good pics and descriptions and there are surely books in your local library to help out. Of course you can only buy what is available, so try chatting to breeders who may advertise in local newspapers, look up the local poultry club and check out their next show. Have fun!

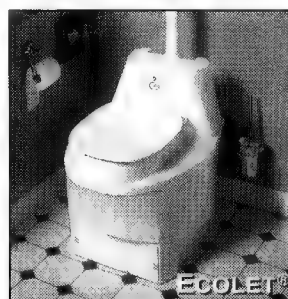
Remedies for broodies

Dear Alanna,

We have four very healthy Wyandottes who have been laying very well. We moved them to a new home and they have ceased laying and have gone broody. Is there anything we can do to get them back on course? I would really appreciate your thoughts. I think they are two years old and their menu has not changed. Thank you.

Yours sincerely, Jo Geb.

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Well Jo,

You have a breed that tends to broodiness very easily. So it's normal. Every hen gets to have relief from the stress and strain of laying when this happens. Give them a break! You can, of course, remove the eggs as they are laid, to discourage broodiness. Remove all nesting material and put them in a harsh, bare, brightly-lit cage for a while — at least for the same number of days that they have been broody. This might 'cure' them.

Roosters anyone?

Dear Alanna,

Can you please advise on how to keep roosters in a backyard setting? I have searched through most local council websites and the consensus is that roosters should be avoided. However, certain circumstances enable roosters to be kept in a backyard which requires a permit. I would like to know what conditions will enable someone to keep a rooster? Thanks. Swee.

Dear Swee,

You need to direct your query to the local council in your area. Ask them if a bantam rooster in a cage would be acceptable, because often pet caged birds will come under different rules to chooks. However, what it all boils down to is the nuisance factor of a rooster crowing at all hours of the day and night. However, if no one hears it, it's not really a problem, even if it's against local by-laws. Animal friendly neighbours might not complain. Perhaps you will not know until you try keeping one. But expect a certain amount of insomnia . . . unless you employ some anti-crowing techniques. The easiest thing is to take the rooster to sleep inside your home at night, perhaps in a sound proof basement or the like. Or you can make him a perch in a night box that can be raised a bit



If you choose to keep a rooster, expect a certain amount of insomnia . . . unless you employ some anti-crowing techniques.

higher after he's gone to sleep and when the urge to crow comes he'll be too close to the ceiling and won't be able to stretch his neck up to do it properly. Good luck!

Cleaning duck eggs

Dear Alanna,

How would you recommend cleaning small numbers of duck eggs for sale? Can they get wet? What is the accepted expiry date? Thank you.

Richard, Mildura East.

Dear Richard,

Pores in the shells of poultry eggs can allow bacteria to pass through into the egg. Luckily there is a protective membrane which coats the egg, so it's best if you don't wash the eggs, because this will remove it. The egg will go rotten much faster without it (and sometimes *salmonella* can be contracted from eating contaminated eggs).

Don't sell any eggs that have been soiled with manure and just remove any other sort of dirt with a quick rub with a rough, damp rag (like a green 'mitt', that has abrasive power). Eggs are best eaten before they are two weeks

old, but refrigeration will always increase the shelf life somewhat.

Raw linseed dangers?

Dear Alanna,

You mentioned linseed as a poultry supplement, advising that it is toxic if not cooked. This alarms me. How does it affect humans? Many people are using linseed in LSA raw as a food supplement. Thank you for your contribution to our search for survival in this time of conflicting information on how to be healthy.

Yours faithfully, Jean Adams.

Dear Jean,

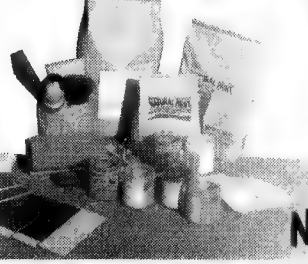
Immature linseed contains the glucoside linamarin which, under certain circumstances, may release prussic acid, which is very toxic to pigs and poultry, says the Queensland DPI publication 'Nutrient Composition of Feedstuffs for Pigs and Poultry'. Linseed meal (and only that processed under high temperatures) should be no more than three per cent and is best avoided in the regular diet of chooks.

I don't think people are generally eating very big quantities of linseed, but anyway — you cannot compare dietary requirements between species. (I don't think I could handle eating layer pellets day after day.) You will find that many things toxic to us are fine for other animals and *vice versa*. So fear not!



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AUSBALE AGM 2003

by Helen Bernard

Daylesford, Victoria.

THE second AGM of the Australian Straw Bale Association was held at the strawbale home of Per and Helen Bernard in Daylesford, Victoria on Saturday 5 December 2003. Members and visitors had travelled a long way to attend: John Glassford and Susan Wingate Pearse from New South Wales, Bohdan and Sophie Dorniak and Lance Kairl from South Australia, and Ian Redfern and Leslie Mortensen from New Zealand. Discussions took place online with participation from committee members Irena Sprey and Mike Faine in New South Wales, Gary Dorn in Western Australia, Chris Newton in Queensland and Paul Fox in Victoria.

The President's report has been published in full in the December member's newsletter. Thanks go to Irena Shapiro who is retiring from her role on the committee as Vice President and Public Officer and for all her work in setting up AUSBALE, and her continuing work in establishing a web site. Please forward photos of strawbale buildings in Australia (or any links to related websites which can be added to the AUSBALE website) to: <huffnpuff@shoal.net.au>.

Ausbale members can join the Yahoo Strawbale discussion list where there are many files that can be viewed including test results. Contact John Glassford on the above email address if you wish to join. Topics for discussion are welcomed from members and include issues such as:

- insurance during and after construction of strawbale buildings
- banks and mortgages for strawbale buildings
- strawbale testing for Australian conditions
- building codes and standards for strawbale buildings
- Australian strawbale building registry — would you list your building?
- members' involvement and attracting more members.

New committee members were elected at the AGM unopposed:



Committee members of AUSBALE from left to right: John Glassford, Helen Bernard, Per Bernard, Bohdan Dorniak and Lance Kairl.

PRESIDENT John Glassford
VICE PRESIDENT and PUBLIC OFFICER Rex Peet
SECRETARY Bohdan Dorniak
TREASURER Per Bernard
State representatives
VIC Helen Bernard and Paul Fox
NSW Mike Faine and Sue Mossman
ACT Andrew Fulton
QLD Chris Newton
SA & NT Lance Kairl and Paul Downton
WA Gary Dorn and Susan Swain
TAS Peter Scott
NEW ZEALAND Graeme North and Ian Redfern.

Memberships for 2004 are due for renewal at the following rates: corporate \$100, founding \$50, individual \$25.

After the meeting, members and their partners shared a wonderful vegetarian banquet prepared by 'celebrity' chef Gary Thomas (longstanding writer of the 'Spade To Blade' column in *Earth Garden*), using fresh local produce.

The past few years have seen an increasing number of strawbale buildings being constructed all over Australia, by both owner builders and professionals, and we look forward to seeing many more beautiful and comfortable buildings being created as more people see the benefits of strawbale construction.

STANLEY WOOD STOVES

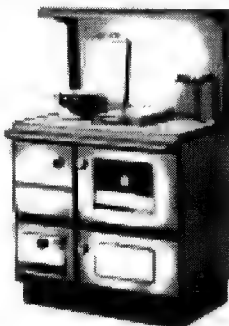
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Sydney-Region Strawbale Spray Rendering

New South Wales-based strawbale builders, Frank and Ingrid Thomas, are pleased and excited to announce that they have acquired their own spray rendering pump. The pump is a Condor MPS303 (Mix-Pump-Spray), which is considered to be 'state of the art' mortar application equipment. Its capacity and size allow them to render strawbale walls with clay, lime or cement.

"This multi-functional device will make rendering — the most time consuming part of strawbale construction — much quicker, cheaper and easier. Individual aggregate particles of up to 25 mm are managed by the equipment and reinforcement fibres can be added to the mix. The twin body is designed to mix in one compartment whilst pumping from the other, further reducing costly delays," the couple told *Earth Garden* recently. Although strawbale construction and clay and lime rendering are the Thomas's favourite, and areas of expertise, they are now available to spray render brick, mudbrick, fibro, gyprock and more.

"You name it, we do it and walls. For an average sized (about 200 square metre) strawbale home we estimate a time frame of one day for the first coat and two days for the second coat (different mix and thicker layer) of

render. This translates into an average costing of \$8.50 per square metre (materials not included)," said Frank.

He says that the third and final coat will be applied by hand or trowel and the time needed for this depends on the number and shape of openings and desired finish.

"To complete our services and readers' rendering requirements we also supply engineered clay which has proved to be as strong and durable as cement-based render, while offering a breathable, healthy and natural alternative. Frank and Ingrid will feature a large range of rendering needs and natural surface treatment products on their website.

Strawbale at Sydney Home Show

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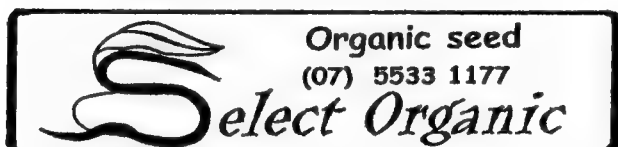
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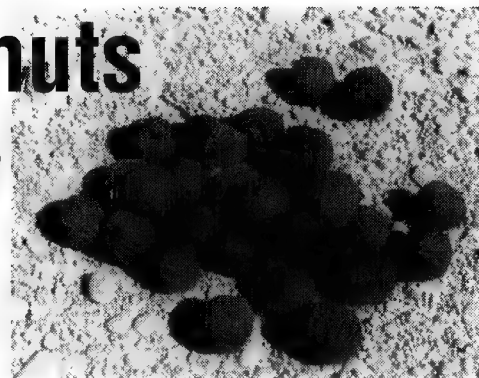
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Evergreen Black Walnuts

Juglans neotropica



Josef has had great success growing these 'tropical' walnuts which are not only hardy but might provide a valuable retirement income if managed correctly.

by Josef A Tamaliunas
Bakers Hill, Western Australia.

THE thing that most amazed me about 'tropical' walnuts was just how easy it was to strike cuttings — even in mid-winter. Initially my interest in these amazing trees was sparked by future considerations for my welfare. A squirrel wisely stores nuts for the winter: why can't we humans learn from that?

Sawmillers and timber merchants quote unbelievably high prices for walnut timber (the stuff is used to line Rolls Royce dashboards). As I understand it, tropical walnut will grow most anywhere in Australia at reputedly the same rate as plantation pines. Planting with a density of say 1,000 trees per acre, a single acre may have a potential of between \$1,000 to \$4,000 per log. That is between one and four million dollars on an acre (0.4 ha) of land.

I doubt if even the world's most valuable legal crop — ginseng — could deliver the same potential, and the walnuts may well be coppiced! One or two acres of intensively cultivated walnuts or a co-op of say ten acres would represent a sensible approach for a retirement program for a group of people, or as a project for your children. By the time the trees were ready for cutting your kids would have enough to retire on long before they began their working life!

Neotropica are easily propagated from seed and may crop from an early age. The nuts are ribbed like a

normal black walnut, they have a thick shell and are strongly flavoured. The fruits also yield a black dye-like substance (black walnut extract) which is marketable. Nuts may be further processed for oil and nut-meal or germinated into plants for sale which would allow further expansion or cover running costs.



Evergreen walnuts do like water in summer, and need water for the first few years at least but afterwards are quite drought and heat tolerant.

Trees grown for timber should be pruned accordingly, though if grown for nuts they can be allowed to grow naturally or pruned for spread. The trees respond very well to fertiliser and may grow quite fast. They do like water in summer, and need water for the first few years at least but afterwards are quite drought and heat tolerant. They are also fire resistant (especially compared to eucalyptus) and also have salt tolerance.

Some of my first trees I'd neglected to water, as I was unable to locate them in tall grass, yet after two summers they re-emerged in spring after life giving winter rains. I'll be fertilising them regularly and providing adequate water this summer to help them catch up. Such a valuable tree that is as easy to grow as blue gum, yet it still remains unknown!

• For those that are unable to order Capulin cherries (see Josef's article in EG 126) via their local nursery, seed may be obtained from: Michael Self at Phoenix Seeds, PO Box 207, Snug, Tasmania, 7054, email: <phnxseed@ozemail.com.au>.

Make Your Own Natural Soap

Making soap is as easy as baking a cake. In this extract from her popular book, *Aromatherapy Soapmaking*, Elizabeth explains how to make your first batch of natural soap.

by Elizabeth M Wright*

Gladstone, Queensland.

TO MAKE your own natural soap, start by just measuring the ingredients accurately, and follow these simple procedures. Then you can produce your own unique, luxurious soap. Allow yourself about two to three hours to make your first batch of soap, though you will require considerably less time if using a stick blender. It could take as little as one hour or more than three hours, depending on how long it takes for the soap to 'trace'.

Lay down several layers of newspaper to place the moulds on. The newspaper will protect the surface from any spills. After the soap has traced it is still corrosive and, if spilt, would damage the surface of a table or floor. To make the soap easier to remove from the moulds prepare them by smearing a light film of vegetable oil over the surface of the moulds. Make sure you don't use too much oil because it may sit on the surface of the finished soap. Have at hand any other ingredients that you will be adding to the soap. Some essential oils can evaporate quickly at room temperature if left exposed to the air, so make sure they are in a sealed container.

Measurements

It is most important to make sure all measurements are accurate when making the soap — inaccurate measurements can mean failed or faulty batches. Weigh the container and adjust scales to zero and then add the ingredient to be measured. I will give weights to make 12 bars of approximately 100 g (3.5 oz) each when mature. You can change the weights in proportion if you would like to make more or less soap.

Make sure the temperatures you are using for the oil and caustic are within the required range. There are differing opinions on the temperatures to use in the soap making process. Temperatures between 27°C and 45°C (8° to 113°F) are commonly used in soap making. The temperatures I give in the recipe section work well for me and are the result of experimentation with a wide range of temperatures. If you are experimenting it is worthwhile keeping a record of the essential oils, and so on, you have used so you

don't repeat the mistake if something doesn't work. If a blend does work well it is nice to have a record. Since it takes four weeks for the soap to mature it can be easy to forget exactly what you put into a particular batch.

The proportions of oils to caustic solution I use are formulated to have a small excess of oil in the soap (superfatted soap). I do this for safety reasons. Use a higher proportion of caustic and the soap may have unreacted caustic even when mature. The soap will have excellent cleansing properties but may be irritating to the skin. Using a higher proportion of oil than in my formula will result in some loss in cleansing properties as you will be using a soap consisting of a mixture of soap and an excessive amount of unreacted oil. Too much oil in the final bars can result, over time, in brown spots on the soap.



Making your own soap, with fragrant essential oils added, is a satisfying way to brighten up your own bathroom, or to make perfect gifts for friends and family.

Ingredients

Accurately measure the following ingredients.

One kg (35.2 oz) of oil consisting of 750 g (26.4 oz) of solidified vegetable oils, chopped into smaller pieces. I use 500 g (17.6 oz) of palm oil and 250 g (8.8 oz) of coconut oil. For the liquid oil I use 250 g (8.8 oz) of olive oil.

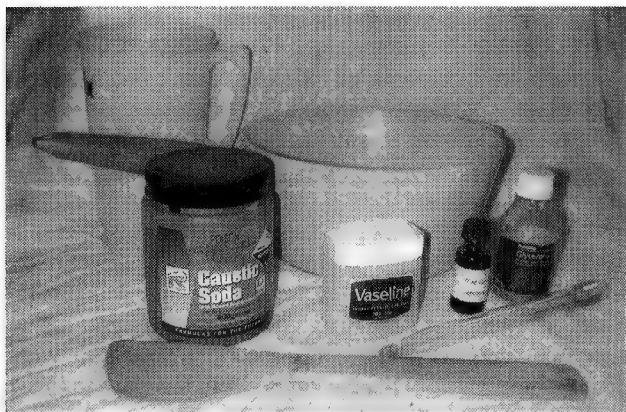
Measure 400 ml (14 oz in weight) of distilled, demineralised or rain water in a measuring jug or container. Remember to check the measurement at eye level for accuracy. If you prefer, the distilled water can be weighed. It is, of course, 400 g. Then pour the water into another pot.

Caustic soda granules (NaOH) — 134 g (4.7 oz). Make sure the caustic soda is dry. If the top is left off the container then the caustic may absorb moisture, making it impossible to accurately measure the actual caustic soda.

Essential oil, fragrant oil or any other ingredients you plan to add at the tracing stage. As an example, try 30 ml (1 oz) of lavender essential oil.

Warm the solidified oil over a low heat until the oil has barely melted. If it is overheated it takes a while to cool down. Check the temperatures as the oil is being heated.

Don't leave the thermometer on the bottom of the pot as it will give you a temperature reading from the bottom of the pot rather than the oil. I usually balance the thermom-



You only need simple tools and ingredients to make your own soap. From left to right: measuring jug, wooden mixing spoon, caustic soda, saucepan or pot, oil or vaseline to oil soap moulds, essential oil, thermometer and glycerol which is sometimes added to make soap softer and more moisturising.

eter on the plastic spoon.

Being careful to wear protective glasses, apron and gloves, add the caustic to the water. **Do not add the water to the caustic.** Use a well ventilated area because the fumes can be choking. The caustic causes the water to heat up rapidly. I usually mix the caustic solution in a pot in the kitchen sink. I add a few centimetres of water to the sink and place the pot in this water. Don't put too much water in the sink, otherwise the container will float and may tip over. The temperature is easier to adjust with the pot in the sink, and it saves carrying the caustic mixture around, thereby reducing the possibility of an accident. Add the caustic gradually, stirring gently with a hard plastic, wooden or stainless steel spoon. The caustic will dissolve in the water.

Sometimes a hard crust of caustic will stick to the bottom of the pot. Carefully dislodge the crust starting at the edges and working in and it will dissolve after a few minutes. You must use a hard spoon as a flexible spoon could flick out some of the caustic solution. The caustic mixture is hot at this stage. By having the pot sitting in water the solution is cooled quickly. Ice may help in hot weather to cool the caustic solution more quickly. Of course, you add the ice to the water in the sink, not to the caustic solution.

Usually it takes a while to get the temperature of the caustic correct at the same time as the oil. You may have to reheat one or the other. When the oil and caustic are both 35° to 38° C (95° to 100.4°F) add the caustic solution to the oil in a slow steady stream stirring all the time until the oil and caustic are combined. I also do this in the kitchen sink in case of spills.

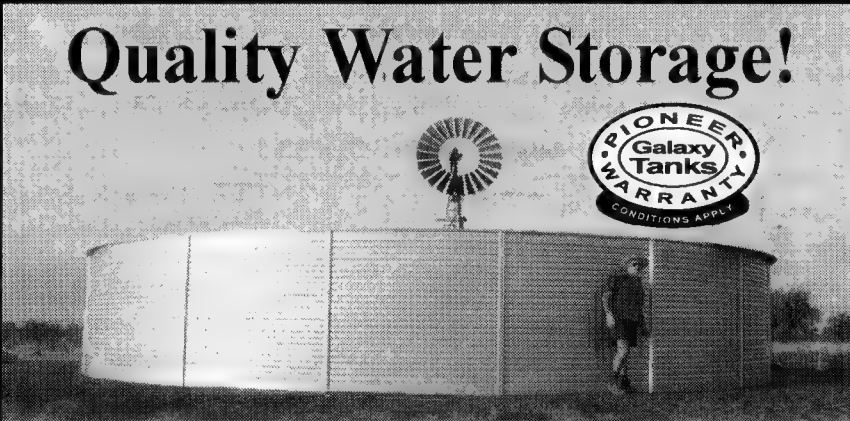
When using a spoon, it is important to continually stir the mixture for at least the first 20 minutes or until it traces. Stir briskly. Continue to stir the mixture until it thickens. While you can take a break after the first 20 minutes, keep it brief, a few minutes at most. As the mixture thickens you will feel the resistance to the spoon. This may take from 20 minutes to one hour or more. The mixture will turn a creamy colour as you keep stirring. If stirring with a spoon, some of the blends with liquid oils may take three to four hours or even a couple of days to trace. I usually stir for an hour and if the soap hasn't traced in that time I leave it in a warm place and stir occasionally, about every 15 minutes, making sure that the film of oil floating on the surface blends in with the rest of the mixture. After three hours I stir less frequently.

The soap has traced when the mixture leaves a raised surface as the spoon is trailed over the top. The soap is thickening, an indication that saponification is occurring. I move quickly at this stage to get the essential oils and any other ingredients into the soap. If you leave it too long the mixture becomes very thick and is difficult to pour into the moulds. The addition of the essential oils will thin the mixture to a point, but if it doesn't thin the soap enough to pour into the moulds you will have to pack it into the moulds with a spatula. The soap is still perfectly good to use even if it is a bit lumpy.

Expert tips

When I first started making soap I used a spoon. Now I generally use a stick blender to speed up the process. For larger quantities I use a paint mixer fitted to a pedestal drill. Provided care is taken as mentioned earlier the stick blender is an invaluable aid. Stirring soap by hand can be time consuming, and where I may have spent 20 minutes or more stirring by hand the stick blender can do the job in a

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few minutes. Watch the mixture carefully. The blender is so efficient that you may blend to the point where the mixture is too thick to pour into the moulds. Continually check for any slight thickening. I use a spoon as the mixture approaches saponification.

Essential oils and other additions can be added at the tracing stage. If you are adding essential oils or the like, take out some of the soap (about 100 ml or 3.5 oz) and blend into this smaller amount of soap the essential oils and any other additives. This mixture can then be stirred into the rest of the soap. This method is useful when blending in clays or exfoliating substances and will make it easier to crush or dissolve any lumps. Alternatively, pour the essential or fragrant oil in gradually, making sure it is stirred in thoroughly. Use 30 to 40 ml (1 to 1.4 oz) of essential oil to 1 kg (1000 g or 2.2 lb) of oil. The mixture will become more liquid and will have to be stirred until it thickens again. This should only take a few minutes.

Now pour the soap into the oiled moulds. The mixture will take anything from 24 hours to several days to harden. In cooler climates, keep the soap in a warm, but not hot area, away from draughts. If necessary, put the soap in a cardboard or styrofoam box and cover with a blanket or towel. The soap is ready to take out of the moulds when it feels hard and comes away from the sides of the mould. Damp rainy weather will delay the hardening process. Warm dry weather will hasten it. In the summer I have successfully removed soap from the moulds within 24 hours, but if you are having a problem getting the soap out cleanly leave it for an extra day or two. After removing the soap from the mould scrape off any discoloured area on top of the soap. This may contain free caustic soda. Let the soap harden for one or two days before cutting. Don't leave it too long because it will be hard to cut evenly.

Cutting the soap

It is easy to cut the soap at this stage with a sharp knife (warmed by hot water makes it easier) as the soap is still like a block of cheese in texture. Cut the soap on a plastic sheet or cutting board that isn't made of wood. I find a plastic place mat very handy for this. If you wait

until the soap has matured before cutting you will need to use piano wire or strong fishing line. If you try to cut the mature, hardened soap with a knife you will find it is very brittle and won't cut cleanly.

Stack the soap in a dry area where air can circulate around it. As the soap is still in a 'raw' state keep it out of the reach of children.

Make sure the soap is kept out of the sun or it will discolour. Place it on a surface that won't absorb any colour. I place my soap on lengths of dowel (approximately 1 to 1.5 cm, or 1/2 to 3/4 inches) to allow air to circulate under the soap. Space the soaps so that they are not touching and turn the bars over every few days to allow for even curing. Let the soap mature for four to six weeks. This allows for any remaining caustic still in the soap to react with the oil. Although it's tempting, don't use the soaps. Let them mature for at least four weeks. If there is any free caustic left it would be harsh on the skin. Also, as the moisture evaporates the soap hardens, making it longer lasting. Soap does improve with age.

If the soap has been damaged while removing it from the mould it is still soft enough to smooth over with your finger and you should try to fix any imperfections at this stage before the soap has hardened. After the soap has matured it may need a little tidying up to improve its appearance especially if you are going to sell it or give it away as a present. During the cutting and maturing stage it may have been unevenly cut or bumped.

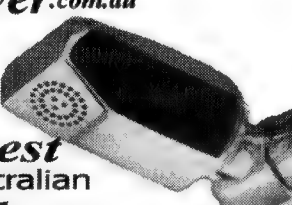
Once the soap has hardened, a knife can be used to gently scrape away any bumps and other imperfections. For minor blemishes wet your fingers and smooth the surface of the soap until the mark has disappeared. I sometimes 'polish' the soap with a dry cloth. It gives the bar a nice shine. However, a few imperfections will give your soap a more authentic, hand crafted look. Enjoy.

***Elizabeth is the author of *Aromatherapy Soapmaking*, an enduring topseller in Good Life Book Club catalogues. The book costs \$16.50 plus \$4.50 postage and handling from The Good Life, PO Box 2 Trentham Vic, 3458, or by phoning (03) 5424 1814.**



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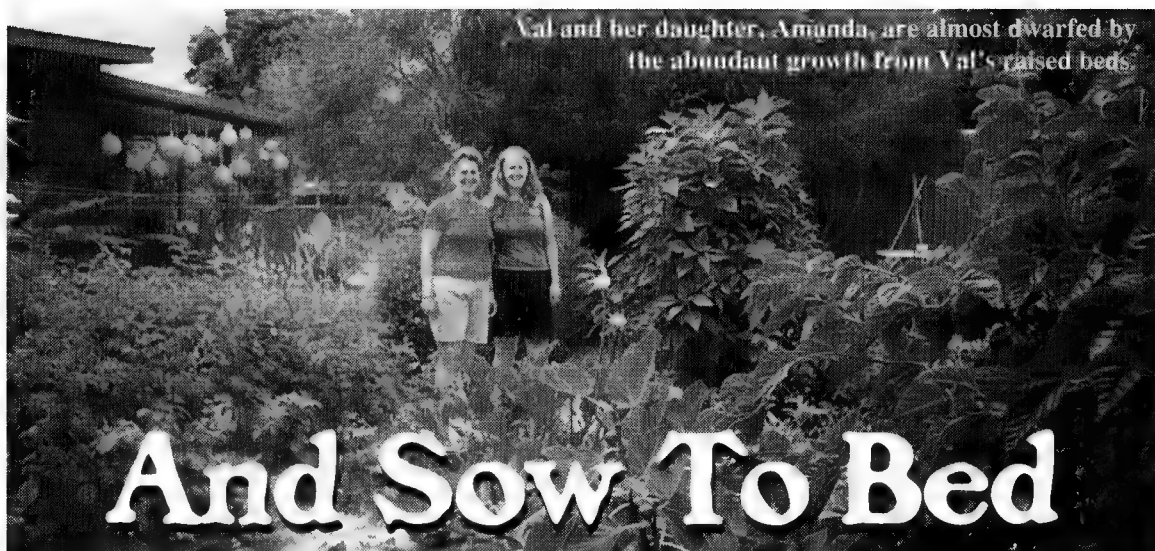
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Lots of heated discussion surrounds garden beds: to dig or not to dig, that is the question. Val is a WA Earth Gardener who describes how her raised bed, no dig system has produced a cornucopia of flourishing vegie plants.

by Val Harris

Albany, Western Australia.

ONE of the wonderful things about gardening is that you can start with just about nothing and end up with something beautiful, satisfying or productive, or all three. A lot of heated discussion can be generated by the subject of garden beds. To dig or not to dig, that is the question. Plants, luckily are more forgiving, and as long as they have sun, water, food and somewhere halfway decent to put their roots, they will thrive. But the basics must be established to give your plants the best possible start.

Maybe your garden has poor soil. It may be sandy, rocky, heavy clay or a combination, but the easiest solution is a raised bed, no dig system. Most plant activity takes place in the shallower parts of the soil. The microbial and worm action helps the plant to absorb the nutrients it needs to grow. Most vegetables have anchor roots that can penetrate a wide variety of soils, provided that the upper structure is well provided for. Raised beds need not be complicated. Large growing plants such as zucchini, squash and pumpkins can do well in a simple mound of good soil and compost and regular watering. Edging is not necessary. But the rest of your vegetable garden needs a little more structure to survive the elements and any stray pets and children who share your property!

Garden edging

The most popular edging for most garden beds must be secondhand wooden railway sleepers. They are relatively inexpensive, durable and in easily managed lengths for building beds. But you can use whatever comes to hand

that can retain at least a hand and a half's depth of soil. We have successfully used rocks begged from a friend's farm, old planking and offcuts of wood from firewood bought for the wood-burning fire. A lot of lengths of wood can be recycled to make great edging. The possibilities are only as limited as your imagination.

One of the main problems is how big to make the beds. Don't make them bigger than double your own arm's length. Basically, that means that you can maintain them and reach the middle of the beds without walking on the soil and causing compaction. Triangles of wood are good, because they fit together with paths between with a pleasing effect and are easy to maintain. Crops like sweet corn do well in triangles because pollination is improved. Traditional squares and oblongs have their place too, to fit into existing garden situations with the minimum of replanning.

Once you decided on the shape and position of your beds, simply place the edging material. Because the soil will add pressure to the edging material you will need to secure the ends of the wood. Multi-nails or gang nails, those spiky things used to hold timber framing together, are inexpensive and strong. Hammered in at the corners they will stop soil leaking at the corners. Old hinges, scavenged and saved from other projects, will be a good secure join for the wooden ends, and the hinges adapt to a wide range of angles of wood. Pre-drilling of harder woods, such as that in railway sleepers, may be necessary for the screws. This is also true for metal braces or wooden supports that cross the angle from the top of the planks, for stability.

If you need to make deeper beds, a second layer of wooden railway sleepers, or wood, can be added once the initial layer is anchored, exactly as you did the first. Loss of soil will be minimal from the horizontal join, once the



This bed, made from secondhand railway sleepers, is unjoined at the ends and is perfect for raising summer sweet corn.

Right: Val has established weed-free paths around her vegie garden beds, now that she's happy with their final positions and sizes.



roots of your plants hold the structure of the soil together. Heavier sleepers will sit in place without the need for additional anchoring, and soil and straw can be built up without movement of the containing edges.

Building up the beds

Line the new beds with newspaper and make alternate layers of good organic material (compost, soil mix and so on) and layers of straw or pea hay. Don't use meadow hay unless you really like weeding: every seed will germinate! A bit of blood and bone and manure and you have paradise for your plants. Arrange the beds so that you need not walk on them, and top up with more organic material, and you will have a self-perpetuating system for your vegies that will be a breeze to care for. By rotating your crops, and companion planting, your soil mix will encourage earthworm activity and the previously undesirable soil below your construction will be improved without any more effort on your part.

The beauty of this system is that, should you wish to re-plan the beds and move them at some stage, it is very simple. The connecting devices can be removed, the wood

repositioned and the good soil shifted without much distress. This method works well for small areas too, maximising the productivity for wherever you are setting up your garden. And if you like the set-up, permanent paths can be laid between the beds, giving year round access to your easy-care garden. You can use the time you save in your construction to relax and watch the sun set on your own little patch of paradise. Sleep well!



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STRAWBALE TOUR OF EUROPE



Frank and Ingrid are master strawbale builders near Sydney who have recently returned from two months in Germany and Europe. They shared strawbale building information, presented slide shows of their work, helped build a strawbale dome and learned some very exciting new (or rather old) rendering and surface treatment techniques.

by Frank & Ingrid Thomas*

Ebenezer, New South Wales.

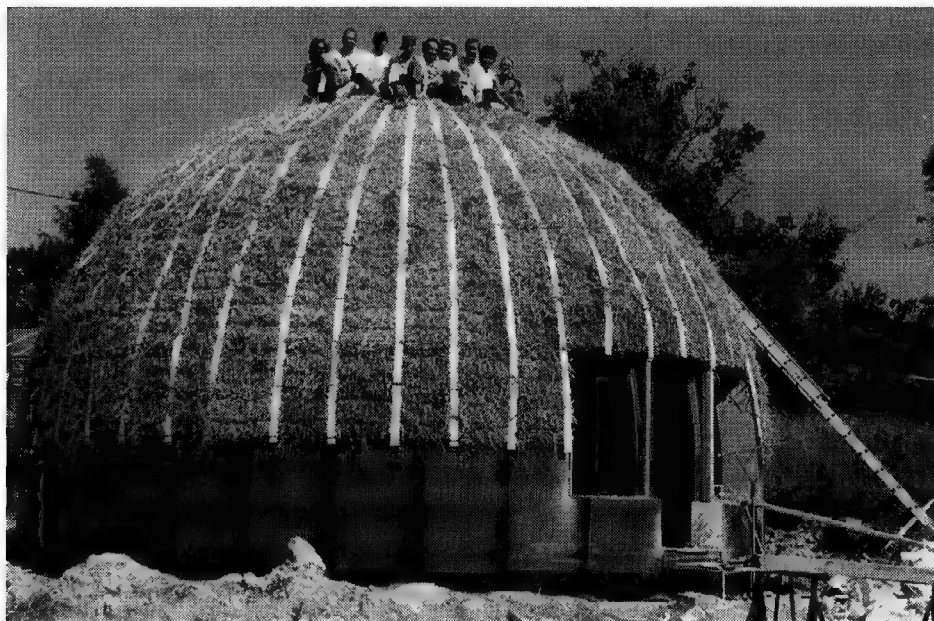
Strawbale building gathering in German eco-village

This three day gathering was very well organised by the FSB (Fachverband fuer Strohballenbau Deutschland, see www.fasba.de) and was attended by about 70 people. Presentations from Switzerland, Austria, Holland, Rumania, Australia and of course Germany included the following themes: German and Austrian fire test results, physical properties of strawbales for building, moisture measurements and building code approval for strawbales. Many different strawbale projects, some residential, some

commercial and some experimental, were introduced as well. The host village, Siebenlinden, is a great example of an eco-community where sustainability, energy efficiency and environmentally friendly principles are followed with the construction of new, and the renovation of old, buildings.

Strawbale (Music) Dome in Germany

This exceptional strawbale building will be used as a sound studio or music-dome where voice development and music seminars as well as concerts are to be held. The musician and owner of the dome explains that the special acoustic properties of domes are due to the sound being distributed very evenly as the waves travel around the room.



This five metre high strawbale music dome in Germany is framed with laminated beams and plywood strips with strawbales in between. The internal walls are clay-rendered.

The strawbale dome measures 8.20 metres in diameter, is about 5 metres high, with an opening of 1.8 metres in the top from where a skylight provides plenty of daylight. It has been built using laminated beams and plywood strips with the strawbales placed in-between this structure. Even the floor is built with strawbales; they are positioned on pallets and particle boards are freely swimming on top. The internal walls are completely rendered with clay whereas only one coat of clay render has been applied on the outside. The dome has been covered with a very tough waterproof membrane and vines are to grow over the bright blue fabric. With the brick foundation hidden by earth and the vines growing over the structure this building will soon blend in perfectly with nature.

Professor Gernot Minke (author of the *Earth Construction Handbook*), together with his research assistant, Friedemann Mahlke, and a team of architecture students from the University of Kassel, Germany (www.uni-kassel.de/fb6/minke) designed, planned and built this structure. They were helped by Frank Thomas, the owners, and clay rendering and finishes specialist Manfred Fahnert. Professor Minke has built more than 20 domes, mainly from mudbricks, rammed earth and earth bags however, this is the first strawbale dome or music dome he and his team have created and probably the first strawbale dome to be found in Europe.

Warehouse and shipyards

We had the privilege to be engaged as guest speakers at a workshop run by the Dutch strawbale building company RAMstrobouw. Their large strawbale project in Warns, Friesland, includes a shipyard, annexe, warehouse and living quarters. It was a rather long drive to get up to this hidden corner in Holland but it was well worth the effort. Rob Kaptein from RAMstrobouw was a great host, organiser and another inspiration to our trade. Our presentation was very well received and it was a pleasure working with Rob and the workshop participants during a wall raising day. The company has completed some beautiful



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strawbale projects which can be visited on following the website: <www.ramstrobouw.nl/>.

Creative plastering course

This advanced and specialised clay rendering, colour design and surface treatment course was run by Manfred Fahnert, a well known expert in his field in Germany. A carpenter by trade, Manfred is an artist when it comes to clay, lime, colours, special surface effects and creative ornaments. The four day course was run at the University in Kassel (www.uni-kassel.de/fb6/minke) and provided a chance to see some experimental loadbearing strawbale buildings with grass roofs at the same time.

Topics and practicals covered included the Italian lime plaster Stukkolustro, the Moroccan glossy lime plaster Tadelakt, traditional Japanese clay and lime render surfaces, decorative surface effects and Lazure painting techniques. Most of these techniques need hours of experience for perfection and are quite labour- (therefore cost-) intensive. However, the effects and characteristics achieved can far outweigh time and money concerns.

Tadelakt and Stukkolustro techniques provide waterproof surfaces without using chemicals or destroying the vapour permeability of clay and lime. The glossy surfaces of Tadelakt and Stukkolustro are achieved by mixing a special soap into the final coat of the lime

plaster. This final coat is worked into the wall, using a granite stone to compact the surface as much as possible. The result is a glossy waterproof surface shimmering in many colours, quite unlike any other plaster finish we have arrived at before.

Traditional Japanese finishes were achieved by using different rendering tools to apply the finish coat. About 300 different trowels can be used to create as many different surfaces. Effects range from rough and textured to a very smooth wall finish. Other decorative surface effects were achieved by adding gold or silver dust, colourful pebbles or similar to the last plaster application. These additives are then brought back to the surface using sponges or brushes to partly liberate them from the plaster. The protruding or visible additives bring texture, colour, shimmer and three dimensional effects to the wall.

Lazure painting is a technique where natural, tinted translucent glazes are applied over walls coated with a natural white paint. Many layers of colours build up to create a translucent and visually textural wall finish.

The paint base and glazes are made of all natural components such as beeswax, casein, tree resins and essential plant oils. The pigments are derived from natural sources as well. They include earth, mineral, ground semi-precious stone such as jasper or lapis lazuli, and high quality plant pigments. Application of lazure paints can be made with brushes, rags, sponges, brooms, combs, leather, balls, hands or fingers; they can be painted on, dotted on, wiped on, wound on; there is basically no limit to creativity and techniques. The results are shimmery, light filled colours that shift with changing light — giving life to the walls while maintaining a healthy and natural environment.

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Leonie rendered her double storey mudbrick house with the ant nest render.



Ant Nest Mudbrick Render

Readers like Amy Ellis of Cairns have recently inquired about mixing termite nest material in mudbrick recipes. Leonie Coombes has kindly sent in a little-known recipe for mudbrick render using the outside crust of a termite nest.

by **Leonie Coombes**

Bawley Point, New South Wales.

I HAVE just found your website and think it is great. We use to buy your magazine over the years when we were building our two storey mudbrick B&B at Bawley Point.* We have stumbled onto a great render that a kind mudbrick builder gave us after years of trial and error. It is made from the outside crust of a termite mound, so the nest is not destroyed. First find the right colour nest you would like, as they vary considerably. The outside layer of one nest, rendered the inside and out of our two storey place with two coats! Once you have gathered the ant nest, then crush it and it will end up like talcum powder.

Render recipe

It is like a muffin mix. Mix the dry in one container and mix the liquid in another, then add enough liquid to the dry to get the desired consistency.

Dry: 4 parts ants nest and 1 part cement.

Liquid: 1 part hydrocrete and 5 parts water. Hydrocrete is a liquid latex and does not form a skin like bondcrete. You can buy it from any large hardware shop. It is also great as a putty for down the sides of windows, just by adding less liquid to obtain a pliable mixture.

You just paint it on with a fence brush. The original recipe doesn't have sand but we put a small amount in just to add some texture to it and we used off white cement so it doesn't vary the colour as much. I hope this is of use to would-be renderers.

Regards, Leonie.

*You can see more details about Leonie and Bryan's mudbrick B&B in the Shoalhaven area of southern New South Wales at <thebawley.com.au>.

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Questions & Answers

... with Jackie French



If you have a problem with fruitfly in the tomatoes, birds munching the mandarines, silverfish eating your underpants or want a recipe for lillypilly cheese, email Jackie at info@earthgarden.com.au.

Goats as pets

Dear Jackie,

I am ready! I have decided to get a goat. I thought a baby girl, perhaps a Boer or a dairy breed. I have a little over 1/4 acre for her to graze on, I have her shelter ready, collar and water container. What else do I need to know please? I fully intend to keep 'Geraldine' as my pet mower, and I don't intend to eat her (gulp) or to breed from or milk her. Many thanks, Kerry.

Kerry,

Go and get a good book on goat care! There should be at least one in the local library. Goats ain't humans (far superior animals) and there's lots you need to know to keep them happy and confined. (Come to think of it, some prospective parents should probably learn a bit more about human type kids before they have them!)

There are so many things you need to learn about keeping a strange animal — I don't mean goats are weird, just that if you grow up with animals around you, you absorb all their background knowledge of the things you must know. Every animal is different — and there are things you may not realise you need to know about goats.

Goats need water, for example, but they can be fussy — if they are used to cold water they may not drink enough hot water, or if they are used to warm water they may not drink enough in winter. (A touch of molasses in the water can convince a goat to drink plenty on very hot days, so they don't get heat stressed.)

Goats will help clear an area of weeds like blackberry — but some weeds can kill them, and no weed is good tucker — if it was, they wouldn't be classed as weeds! So they must have good feeding as well as the weeds — and, of course, if they have good feeding they may ignore the weeds! Also you should be aware that any dreams you may have of a close-cropped grassy sward are unrealistic. Goats aren't really grazers (exclusive grass eaters) rather they are browsers and eat bark, twigs and branchlets of trees and shrubs so they make rather inefficient lawn mowers.

Make sure the paddock has no plants that might kill her — goats are pretty selective naturally, but in a small area, especially in dry times, they will be forced to eat

whatever is around and it may kill them.

If you don't mind a lot of extra work goats can be tethered, but a middle-aged goat who has never been tethered will find this a shock and never get used to it. As the goat is entirely at the mercy of the elements you have to provide shade from the sun and shelter from wind and rain — they have no lanolin in their hair so they get wet to the skin when it rains.

Goats also don't like to eat grass they have trampled on — or left dung on — so tethered goats need to be moved at least once a day — and tethers tangle. (A tether strung through a bit of flexible hose is less likely to tangle.) Use swivel links to attach to both the collar and the stake, so the goat doesn't get wound up. Make sure if you have two goats that they don't tangle in each other's chains too! But if possible don't tether goats — have them in a fenced area or use an electric fence to control exactly where they graze. But don't depend on an electric fence to stop them straying — goats are canny creatures and will soon notice if an electric fence is off — and electric fences are only reliable 98 days out of 100.

Goats love shrubs — and bark — so while they need trees for shelter, they can also kill the trees. Try wrapping wire around the base up to goat-on-two-legs height — though this only works if the goat doesn't work out how to climb the tree. (Don't scoff. I have seen a feral goat here climb one of our apricot trees.)

You can also plant crops for your goat, so they can have a fun and varied diet — lucerne, comfrey, kale (a fast grower even in winter). Don't feed roots to males as they can lead to urinary calculi and lead to a blocked urethra.

Goats are also gregarious animals — they get lonely if they don't have company! And a lonely goat may become obstreperous and work out how to get over/under/through any fence you can design! Which is why it's best to have two female goats. And even though you say that you have no intention of breeding from Geraldine you may very well find out that she has other ideas about this area of her life too. A love-lorn nanny on heat is a very noisy and stropky beast — remember she wants babies even if you don't. And then we come to what to do with the resultant progeny — and if you aren't prepared to eat them or give

them to someone else who wants a barbecue — you then have to find a home for your unwanted male progeny.

It's probably best to buy a young goat. That way you can train each other, and your goat will get used to the accommodation and grazing you can offer her — and learn that humans are loving and affectionate animals.

Blimey — I'm starting to write you a book on the subject... but a book is really what you need, as there is so much to learn about goats if you are to keep them happy — and they are to be kept in a way that keeps you and the ecology happy too!

Above all, make sure she can't get out! Goats are fantastic escape artists. (I once saw one standing on the top of a pile of four chairs stacked on a table — it was peering up into the apple tree to eat the leaves. Goats can get over/under/through fences that will keep in sheep, cows or dogs — and once they get out they can cause devastation. Our once rainforest gullies are now literally bare eroded clay due to a goat farmer who let his unwanted and unsellable stock into the Nature Reserve. They breed far too quickly and are far too evasive to ever control totally now — so we must watch the bush slowly degrade while trying to keep up a holding action. But one goat can eat a large part of a garden in an afternoon! (Almost as bad as neighbours' cattle — ahem: must keep off that subject — too close to home.)

Having been so discouraging — goats can be incredibly friendly, especially if you have them from kids and give them a lot of attention and let them know right from the start that you love them but that *you* are the *Homo sapiens* around here, that is: the boss!

All the best, Jackie.

Chook questions

Dear Jackie,

We have five white leghorns who free range in our back yard. Three were hatched from eggs we got from a chook farm when one of our older choos went broody, two we rescued from a battery farm. They are good layers: the eggs have been beautiful with lovely yellow yolks. In summer we usually get four or so eggs a day from the five choos, fewer in winter. The problem is that we seem to be getting lots of soft shelled eggs. Sometimes an egg seems to have a proper shell at one end and gets progressively softer towards the other. Sometimes the eggs are completely soft all over — the shell is almost translucent. Occasionally we've also had watery eggs, the white, even when boiled, seems to be made up of two parts with separate consistencies, one greyer than the other. This wasn't

always the case, but seems to be happening more and more.

They have access to shell grit (which we collected from a beach) there is always a bucket of this in the yard with them. We feed them layer pellets mushed up with warm water, supplemented with all our kitchen scraps plus a few handfuls of wheat or corn in the evening. They look healthy with the exception of bald patches on their fronts which most have and we thought was moulting but nothing seems to be growing back. Any ideas? Could it be that we didn't wash the shell grit and it is salty and they don't like it?

Jo.

Hi Jo,

The soft-shelled eggs are probably a calcium deficiency. The choos may not like the shell grit you collected — it may be too coarse. Don't know if they would avoid it because of the saltiness — but too much salt can kill choos, so I'd wash it anyway, and grind it up smaller if you can — otherwise get commercial shell grit. I also have a feeling it may be illegal to gather shells from the beach; don't know if it is in Tasmania.

Shock or stress can also cause the shell-secreting glands to malfunction — woofy dogs, inquisitive kids, loud noises like New Year's fireworks — depends how flighty and nervous the birds are — and Leghorns are notoriously flighty! A shortage of food or water can also seem to trigger soft shelled

eggs and this is more common in summer when the choos may be heat stressed, and so eat less than they need for good egg production or, if the water they are given is warm, they may not drink enough either.

Chooks need to be kept cool, like humans, so keep an eye out to see if they are panting, or trying to dig themselves into cool dirt, or all clustered in the shadiest spot. You may need to insulate the chook yard, plant climbers, or work out some way to keep the water cool and fresh. (We use a dripper over the water bowl — the surplus flows down to the garden, and the water is always reasonably cool and fresh.) Make sure choos have a good supply of green stuff in hot weather too.

Chooks also may not lay as well when they are moulting. Some hens moult gradually, so feathers grow back as they are lost. Others moult more suddenly. Chooks need more tucker when they are moulting, too.

Unfortunately I could keep going here, with more reasons why you have an egg problem! Basically *any* stress — emotional or physical, from disease to passing hawks — may affect the eggs. And older choos, or choos going off the lay, also produce more soft shelled



A love-lorn nanny on heat is a very noisy and stropky beast — remember she wants babies even if you don't. These are new-born dairy goats, snapped by Cheryl Rudd of Inverell in New South Wales.

eggs. (The grey whites sound more like stale eggs, or eggs that have gone off — perhaps got damp and dirty from chook feet, so bacteria have been able to penetrate or you have become confused about the age of the eggs and have inadvertently kept some too long.)

It does sound though as if the chooks may have a mite problem, rather than be moulting — and this too will stress them, and have an effect on egg production, not to mention the happiness of your chooks.

Chooks can be infected with a range of mites, lice, fleas and fowl ticks. Often they can have a low level of infestation and not show any real problems, but bad cases can kill a chook — and even mild cases stress the chook from discomfort and blood loss (mites) or feather loss from body, shaft or feather lice (chook fleas don't behave like dog fleas — they mostly stay fixed to the chook. Fowl ticks can also cause anaemia in chooks).

I used to recommend derris dust for mite and flea control. It's effective, but no longer a recommended organic remedy as it has been associated with higher levels of Parkinson's disease. On the other hand, gardening generally has been associated with this and Derris may — or may not — have been unfairly implicated. I've also used sulphur dust, mixed with baby power to help it stick — equal parts sulphur dust (order it through a chemist) and talc. Sulphur, however, is bright yellow and stains what it touches yellow, and may be an irritant in hot weather. There are also permethrin — an artificial pyrethroid — dusts about, and I'd go for those. They may not be directly plant based, but they are less likely to cause irritation than ground pyre-

thrum flowers — which I have found not to be terribly effective. A pyrethrum spray is an effective killer, but you won't get good penetration through chook feathers — not without real trauma to the chook.



You really need two people to 'dust' a chook — one to hold it upside down, and the other to very quickly dust it.

You really need two people to 'dust' a chook — one to hold it upside down, and the other to very quickly dust it. Chooks of course do not like being held upside down, but if they are standing upright the dust just slides off the feathers. Repeat every four days for two weeks, then after another three weeks to help break the life cycle of the pests.

You'll also need to treat the chook shed, if it is made of wood, and perches too, to get rid of the mites. Creosote used to be used, but is good for neither you nor the chooks. But any paint or oil covering (old-fashioned whitewash used to be used twice a year) will get rid of the pests. And you may also need to treat their dust baths — replace with clean dirt!

Please excuse the spelling and typos — I'm trying to race through a pile of emails! And I do hope this helps. There's only a limited amount I can put in an email — the

next resort is a vet!

All the best, Jackie.

Can mites kill chooks?

Hi Jackie,

I have been raising chooks free range for the past five years and now for the first time the broody chooks have been infested with mites. Of the last four hens no chicks survived and I put this down to the mites. Yesterday I found a hen and all her chooks dead. Could the mites kill the chooks or do you suspect something else? Do you have any suggestions to control the mites? I have made a solution of neem leaves and water though to no effect. I would appreciate any advice. Thanks, Carole.

Hi Carole,

Yes, chooks can die of mite infestation, mostly through blood loss, but if the chook and her chicks are all dead on the one morning it sounds more like disease in your flock — and this means a vet's diagnosis! There are a whole lot of chook viruses — I would have to have a lot more information, but again, a vet would be better at this, as there are some — like Newcastle disease —

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that are desperately serious.

Neem solution is a good insecticide but it is difficult to get liquids to penetrate sufficiently to kill mites on chooks' skin or fine feathers. Chooks can be infected with a range of mites, lice, fleas and fowl ticks. Often they can have a low level of infestation and not show any real problems, but bad cases can kill a chook — and even mild cases stress the chook from discomfort and blood loss (mites) or feather loss from body, shaft or feather lice. Chook fleas don't behave like dog fleas — they mostly stay fixed to the chook. Fowl ticks can also cause anaemia in chooks.

It really sounds as though you need to contact your local vet or Department of Agriculture about what is killing the chickens — they may know of any disease outbreaks in your area too. Mites are so irritating hens don't sit well on eggs. They'd need more information too about any other symptoms — what the droppings are like, any diarrhoea (and what colour), listlessness, gasping, huddling together, blue tinged or very pale combs, any inflammation or swellings . . . sorry not to be more help! Come to think of it, it might also be infected feed or water — just too many variables! This sounds like a case where a vet is really needed, just in case.

All the best, Jackie.

Local climates

Hi,

A question for Jackie. With her permission, of course, I would like to know in what area of Australia she grows her produce. I do not mean the actual locale, but I will be living in Sarsfield, just out of Bairnsdale, East Gippsland, and if she lives in a similar climate, then I can use her articles, ideas, experiences in a far more meaningful manner. Thank you. Regards.

Cleveland Eldred.

Hi Cleveland,

I live in the Araluen Valley, on the New South Wales Southern Tablelands. Last year we went down to minus 7°C and so far this summer our hottest two days

went up to 49°C. Rainfall ranges from 85 mm to 1500 mm a year, though we have only once in the past 30 years had either of those extremes. We have established micro-climates here so a good range of fruit trees (about 260 at last count) survive. In a year like this 'survive' is the operative word.

Any help? I have farmed in Queensland though, and most of the stuff I write about is as applicable to as wide a climate range as I can make it, with the exception of truly tropical. Our seasons are bloody cold and bloody hot, not bloody dry or bloody wet.

All the best, Jackie.

Tyre gardens

Dear Jackie,

I enjoy reading your articles in *Earth Garden* and also have a few of your books which I loan to wwoofers as well. We all find them extremely helpful. I have a query about using old tyres for planting vegetables in. I know you have talked about potatoes in tyres but is there a problem with chemicals leaching into the soil from the tyres? I am using them throughout my large vegetable garden and find they work very well. Hoping you can put my mind at rest. Kind regards.

Gaye Hill, Hamilton, New Zealand.

Hi Gaye,

Information varies on whether there is leaching from old tyres. There definitely is *some* leaching, but for how long and in what amounts is open to debate — you get quite different test results from different authorities! (It is possible that very old tyres have far less leaching, but I don't know of any tests that measured how much was leached over a period of years.)

I used to use old tyres far more than I do now. Mostly I don't use them now because I found the tyre gardens needed far more water than the in-ground gardens. I now only use the tyre gardens for speeding up crops like early tomatoes and mini capsicum and early basil — too few plants to ever be a health risk. I'm sorry I can't help more!

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Smallholdings, subdivisions, and struggles with Shires



Jen, Jarrod, Charlotte and Felix on their small acreage.

Many keen back-to-the-landers buy a property that is too large for their needs. The belief that land cannot be subdivided under 40 hectares has stopped many a worn-out weed grubber from trying this avenue. But it is possible, as Jill Redwood reports.

by Jill Redwood
Goongerah, Victoria.

WE climbed the hill and turned around to overlook the little paddock. The river wound through the trees bordering the lush green flats and the backdrop to it all was Mt Ellery, glowing golden in the sunset. As if that wasn't magical enough, two black cockatoos flew over our heads and into the idyllic scene. That clinched it. This was the perfect piece of ground for a home and small seed growing business.

Jen and Jarrod Ruch had been looking for that dream block — small acreage surrounded by forests, rich river flats for growing, clean reliable water supply, good rainfall, isolated to ensure no cross pollination or GE contamination, supportive community, and close to a small school for their two children, Felix and Charlotte. This is the land everyone imagines but few places have the right combination of ingredients. It's the small size that's often the most difficult to find. A manageable parcel of good land is rare.

Most councils are opposed to subdivisions and don't encourage landowners to cut existing titles in two.

Answering the urge to own land, enthusiastic city refugees can sometimes end up with a gazillion acres of weeds and blackberries, bad backs, blisters and no time for enjoying the garden. This can result in either the land suffering from neglect, or the owners suffering from battling weeds and building fences for the next 30 years. When the reality hits of what managing a large acreage means, plans can go askew and disillusionment can set in.

I was lucky enough to find a small 22 acre holding 20 years ago but had been thinking of selling off the seven acre paddock up river to give me more time to devote to other things. But with the local council being less than sympathetic to new settlers with new ideas, it seemed pointless trying to subdivide, and so pointless advertising. This is where serendipity — and Jen and Jarrod — stepped in.

Wrong number delivers dream block

Jen and Jarrod had been calling estate agents in the

country towns asking about isolated parcels of land — and as fate would have it, got one digit wrong and ended up calling a café who passed the phone over the counter to a local neighbour who put them on to me as the valley's only accommodation place. This small isolated valley sounded just what they were after. When they came up there was no land for sale that suited their needs. I mentioned my seven acres up river but I wrongly thought it could only be 'owned' on a 99 year lease agreement. We walked up onto its hill slope. The rich grassy flats below and the black cockatoos above both called to them, the deal was done and now three years on, a subdivision has been granted!

So how might anyone get around council regulations? From Jen and Jarrod's experience, it took persistence, an initial 99 year lease agreement between us, starting to get the place established, doing everything by the book (access track, building permits and so on) and making it clear they were serious.

Most councils are worried that cutting up large scale traditional properties with their large scale methods of farming to tackle large scale weed problems, with large scale irrigation to sell large scale crops or truck off large loads of cows and sheep, is the only real way to make an income. After all, what else is there? The farming lobby aids this resistance to subdivisions. Hippy farmers with their raspberries and tourism ventures, seed growing and garlic, native flowers, nurseries and organic vegies will send a region into terminal decline. It's cows, sheep and mono-crops that produce wealth. That right?

A common complaint from the farming lobby is that their population is ageing and the young people just don't want to step into grandpa's gumboots. But there are plenty of keen young people who'd like to try the small scale way of doing things. It seems crazy to block this increasing trend and prevent subdivisions in circumstances that suit it.

Large problems versus small problems

Over the last 30 years or so there's been a broadening of rural enterprises, and while there are still traditional farms making (or eking) a living, there have been many smaller ventures start up. These often require less land and less outlay but target the right markets and end up comfortably supporting a family. Large scale farms usually have large scale profits and losses, large scale land degradation problems, large scale risks and so on — whereas small scale farmers can more easily manage their venture without busting their guts and going bankrupt. It's a matter of being creative and choosing the right thing to farm in the right place. An Earth Gardener's lifestyle and a small farming enterprise can be a very complimentary mix.

Small scale farmers are often more in sympathy with the land and are able to deal with problems without using bulldozers, chainsaws, guns and gallons of toxins. They also seem to be more adaptive to new ideas and tree planting.

Depending on the planning staff and individual councillors, you might be able to convince the shire of the

benefits a subdivision would bring. Besides more rates and more fees for them, there are more families to keep small communities from shrinking and more money for local businesses.

It would be worth looking at the fine print of your own council's planning scheme. You may be lucky to find clauses that allow for small subdivisions and a residence to be built to start up a legitimate rural enterprise. Small subdivisions could be granted if they "will facilitate more effective use of the land". Council might also approve subdivisions if there is a lack of smaller lots for sale in the area that can be used for "innovative agricultural developments or enterprises".

Also, it appears that a subdivision can be granted if there is to be a home built on the land or if a dwelling is needed to carry out the rural activity on the land. In making a decision to grant a small subdivision, councils must consider a list of issues, including if the landholder will maintain the agricultural production and local economy of the rural zone and enhance the environment and natural values of the area. Ask for a copy of your local planning scheme and rural zoning guidelines. Selling that far paddock with its own access and water could be a real possibility.

If you decide to subdivide a bushland area to sell, be aware of the risk that the new owner, or the owner after them, might go the hack with a chainsaw, bulldozer or 50 goats. Consider putting a covenant protecting the bushland on the new block to stop this happening. A covenant is a legal agreement attached to the land title which is binding on all future owners. Contact the Trust for Nature or Department of Conservation in your State for more information.

Far East Gippsland

In our situation, the valley of Goongerah is surrounded by national parks and forest. It hasn't had a viable conventional farm for about 20 years. Its position is more suited to small scale farming enterprises and tourism. The council sees it as a haven for 'hippies' and 'greenies' and so was reluctant to set a precedent by allowing a subdivision. They were worried there would be a proliferation of brown-rice-eaters in humpies. That might be a legitimate concern from their standpoint. However, Jen and Jarrod made it clear they had a business plan, a young family, a combination of professions and experience and wanted to use these skills to start up a non-hybrid seed growing business. The markets were there, the land was there — all they needed was council support. They were persistent and polite, and did everything by the book. Eventually, to everyone's great delight, the council agreed to a subdivision.

Having your own name on a piece of land to practise some mutual nurturing is a common dream — that is achievable. It's also great to have good neighbours to share the food glut and swap recipes and tools with, as well as feed each others chooks when we go away for a couple of days. If you have a large block you'd like to see shared with sensitive new age farmers (SNAFs), test the waters — you just might be lucky.

Build Your Own Compost Tumbler

Stan is an avid Melbourne gardener who has built his own compost tumbler for only \$40. Here he explains how you can make your own.

by Stan Marshall

Burwood, Victoria.

COMPOST tumblers can be used with great effect to speed up the composting process, reduce flies and keep rodents away from your future garden food. You can build your own compost tumbler for as little as \$40 in material costs if you follow these instructions. Your main challenge is to find a used pickle barrel (by keeping your eyes and ears open around your district), and to get a small amount of welding done at a local metal shop if you don't weld yourself.

Materials

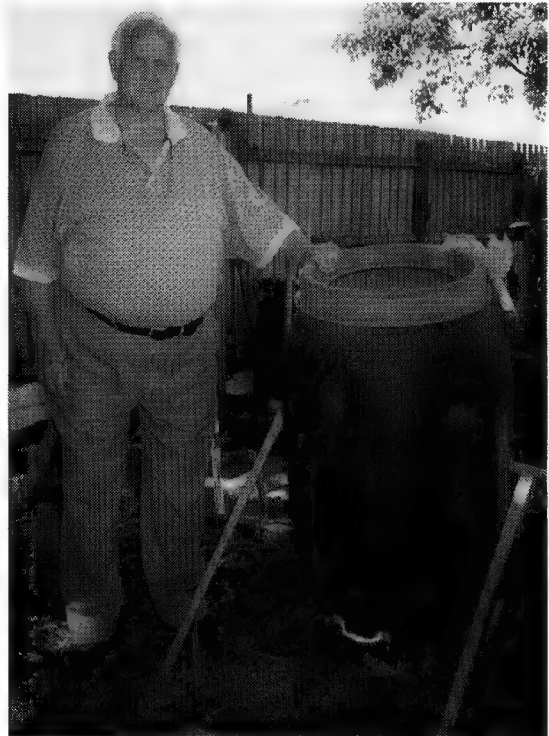
- 1 pickle barrel with screw top lid (200 litre or 44 gallon)
- 30 x 4 mm angle iron — 6 X 1000 mm
- 40 x 5 mm flat steel — 2 X 300 mm
- 19 mm water pipe — 2 X 90 mm
- 17 mm round bar (5/8" rod) — 1 X 1000 mm
- 12 x 12 mm square bar — 2 X 780 mm and 2 X 300 mm
- 4 flat washers to fit round bar
- 4 split pins to go through round bar
- 2 handles to screw onto the pickle barrel.

How to build it

Weld together the two triangles from the 30 X 4 mm angle steel, then join the two triangles (780 mm apart) by welding some 12 mm square metal to make the base. Weld the water pipe at the top of each triangle 560 mm apart. Select a barrel with a screw top lid. Drill a 17 mm (5/8") hole exactly in the centre of the barrel (on on each side) — this is to put the 17 mm round bar through. Now drill one 17 mm and four X 6 mm (1/4 inch) holes into the two pieces of 40 x 5 mm steel to make the brackets which will be bolted to each side of the barrel.

Push the 17 mm rod through the 17 mm hole in the 40 x 5 mm steel then through the 17 mm hole in the barrel, then through the other 40 x 5 mm steel piece, leaving an equal length of rod on each side of the barrel.

Drill a 3 mm (1/8") hole into each side of the rod. Bolt

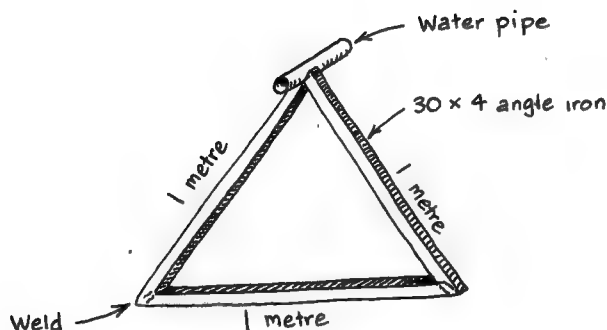


Gardener, Stan Marshall (79) with his homemade compost tumbler (\$40).

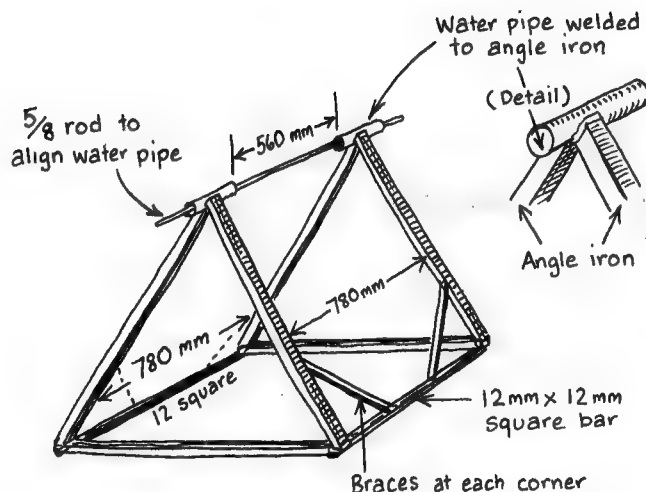
40 x 5 mm steel to the barrel using 8 X 25 x 4 mm bolts.

Take the rod out of the barrel. Now push the rod through the water pipe, then the flat washer through the barrel and steel. Fit a flat washer on the rod then continue to push the rod through the other piece of water pipe. Fit a flat washer to each side of the rod. Drill a 1/8 hole and fit the split pins at either end to prevent the rod from slipping along the water pipe. Tack weld the rod to the round bar.

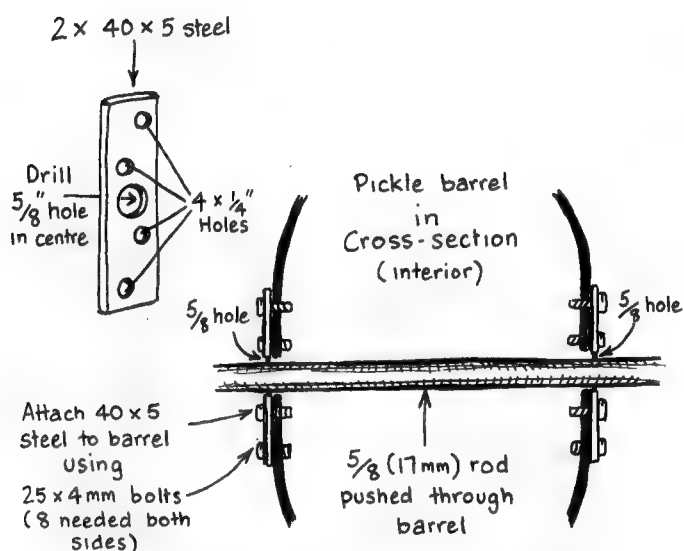
Now you can paint all the steel with a rustproof paint. To empty the barrel when the compost is ready, take off the lid and turn the drum to face the ground. Rock the barrel until all the compost falls out onto the ground, then lift the barrel and frame out of your way and shovel the compost into your barrow and onto your garden. A refinement might be to raise the height of the triangular frame to make the tumbler high enough off the ground so you can slip your barrow underneath it. You'll have to experiment with



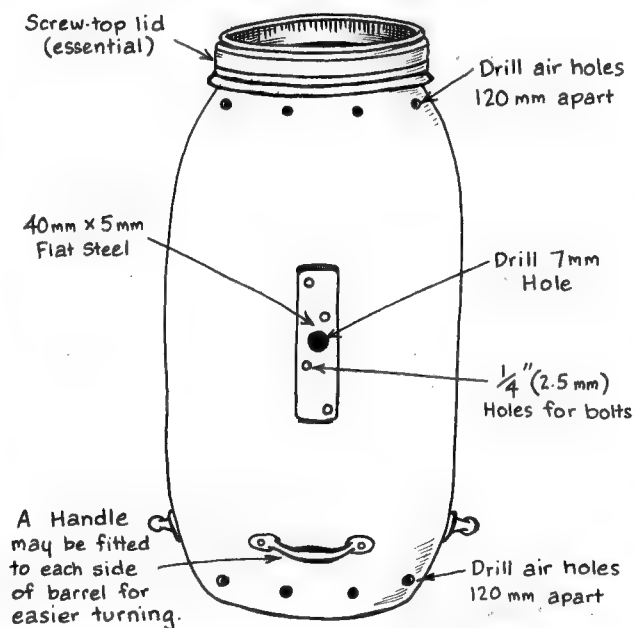
Weld together the two triangles from the 30 X 4 mm angle steel and weld the water pipe at the top of each triangle 560 mm apart.



Weld some 12 mm square metal between the triangles to make the base.



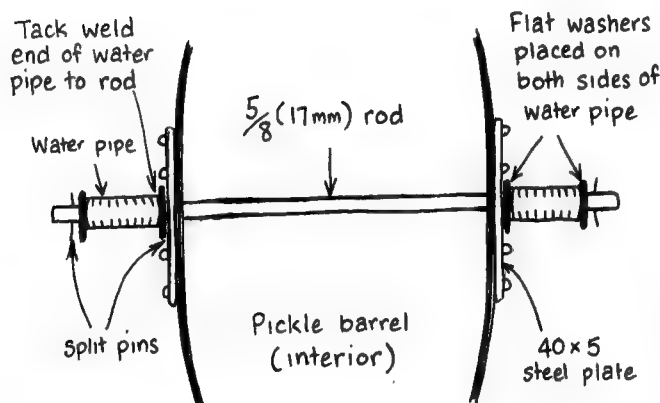
40 X 5 steel and pickle barrel in cross-section.



A good compost tumbler can speed up your compost making.

your own measurements to attempt this.

The barrel is best filled with grass cuttings, torn up newspapers, kitchen waste and manure and then turned every day or so. Do not wet or water — if you do it will finish up too wet and will not be compost, but wet big balls of waste material. A good rule of thumb is to add one part scraps to three parts dry grass clippings, old straw or the like to make sure the mix doesn't become too soggy. Compost takes approximately 12 weeks.



All steel surfaces should be painted with rustproof paint.

From Spade To Blade

Gary Thomas' Garden Recipes

Gary Thomas, garden chef, made a rhyme, and . . .

Ten little Brussels sprouts

*Ten little Brussels sprouts, dressed above the hem
Halve them down the middle and nick across the stem
Lightly oil wok to hot and throw in Brussels sprouts
Toss and sear one minute so the green grows more pronounced
Add to wok two garlic cloves you've pretty finely chopped
Two tablespoons Thai chilli sauce and the same in vegie stock
Dribble in some extra stock to keep the stir-fry svelte
Five minutes, salt and pepper gives an excellent result.*

AND more. Gary picked a peck of poddy peas . . . I've been feeling all chipper this morning and so, so holy. You see, I reckon I picked a bushel of peas before they'd been touched by the morning sun (I'm writing this around Christmas time). At least I thought it was a bushel. Until I looked the measurement up in my old world dictionary and saw it is the dry measure of 64 pints. That's a lot of peas. Still, I reckon I must have picked a peck at least. Or maybe a quart.

I'm doing more vertical gardening this year to maximise on limited space so peas are on high wire frames (the snow peas currently measure 2.2 metres above ground level), lettuce are all snuggled up in one bed together and potatoes are standing up against the perimeter fence already in the bag.

I'm also revisiting the Mexican three bean method. This time I planted the corn a month before the beans and squashes so that the stalks were a bit more advanced before the beans started to climb them. This is giving me three good crops from one small patch.

We find corn very exciting around our way. It's a once-a-year crop and we make the most of it.

Chilli and corn fritters

4-6 long green chillies
4 fresh corn cobs
1 tsp salt
half teaspoon pepper
3 tbsp plain flour
oil for cooking.

1. Roast chillies until just soft. Place in plastic bag and seal for ten minutes to release skin. Peel and, using a spoon, scrape away much of the seed membrane. Chop fairly finely.
2. Using a sharp knife, slice the kernels from the corn cobs. Use the back of the knife to release the last milky bits. You should have about three cups.



3. Purée the corn kernels, add the chillies, salt and pepper. Slowly incorporate the flour.

4. Heat oil in thick fry pan over medium flame. Drop tablespoons of batter into oil and fry gently for a couple of minutes until brown, then flip over for another minute on the other side. Drain on brown paper and keep warm whilst cooking remainder.

5. Serve with a Waldorf salad.

6. To make a Waldorf: wash, dry, core and dice two red and two green apples. Mix them in a bowl with half a cup of sherry vinegar or red wine vinegar in a pinch. (If you have to use bulk white vinegar, cut it with a good dash of apple juice). Add about 1 cup of chopped celery pieces and half a cup of shelled walnut halves. Mix all well together with 100 ml of fruity olive oil. You can use walnut oil to further intensify the flavour. If you are going to make your own oil, pick and keep the ripe nuts for a couple of months before pressing. This allows them to develop maximum oil content.

Roast South American salad

This is good for lunch with a big loaf of crusty bread and butter.

4 ears corn
100 ml olive oil
1 tsp salt
big pinch ground black pepper
2 red capsicum
1 purple onion
about 600 grams sweet potato
4 squash or small courgette
1 ripe lime.

1. Preheat oven to hot, about 220° Celsius.
2. Cut corn into thirds, capsicum into sixths, onion into quarters, potatoes into fat 1 cm coins and squash into halves.
3. Toss all with oil and seasonings. Spread in a single layer on a baking dish. Bake for about 15 minutes, turning once as necessary.
4. Remove to serving dish. Combine pan juices with lime juice and drizzle over vegies. Serve immediately.

Eggplant chips

Eat as a snack anytime.

4 medium sized eggplant
500 grams stale bread
1 dessertspoon fresh rosemary tips
3 eggs, beaten
1 cup plain flour
salt and pepper
oil for frying.

1. Prepare the crumbing set: put seasoned flour into large shallow dish. Put eggs into separate dish. Mince bread with rosemary to a fine crumb. Place in third large dish. The thing about crumbing is that it does take up space and it can be quite messy so I find it easier to accept these conditions before starting. This encourages me to allow plenty of space for the job and to use big dishes for easier cleaning up after.

2. Top and tail the eggplant. Cut into half or thirds lengthwise (depending on the size), then half again and half again, all lengthwise, to make the wedges.

3. Toss a few wedges at a time in the flour. Pierce a wedge with a fork and use it to transfer the wedge into the egg mix bowl. Coat thoroughly.

4. Still using the fork, transfer to the breadcrumb mix and



use free hand to gently coat wedge all over. Repeat process until all wedges are complete. Place each wedge separately on flat sheet.

5. Heat oil in good pan over medium flame to finger depth. Test for correct temperature then fry wedges until golden, turning once. Take your time over this so that the oil remains at operating temperature. The wedges will absorb less of the oil this way.

6. Serve with some homemade tomato sauce.

I've made tomato sauce for many years, sometimes it's exciting and sometimes the thought of the mess and the chore is tiresome.

When I feel that way I just make a small batch of sauce, maybe no more than half a litre. Just use your favourite recipe, scale right back on the quantities, particularly the spices, and it's ready in no time at all.

Now, though, I've got to mobilise some children for shelling duties. Shell the peas with your thumb, one in four can hit the tum.

Cheers, Gary Thomas.

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Wwoofing South of Sydney

Earth Garden's nomadic WWOOF host and wwoofer, Colin Statham, continues his series of articles on WWOOF host farms around Australia. This issue he potters around painting south of Sydney, visiting various WWOOF host farms.

by Colin Statham

Runaway Bay, Queensland.

I LEFT Port Stephens last December, in an old campervan. Where was I off to this time? Just south — Bowral, Kangaroo Valley, and Lake Conjola. The first of the hosts I'd written to were Sally and Bill, living on a lovely 2.5 acre property, with kangaroos and two small orphaned wallabies. Work was painting a garage door and timber battens. Attractions (or distractions) were the two wallabies, wanting to put their noses in the paint tin. They slept in bags in the house and were so trusting. Three lovely days here, then off again.

Batemans Bay, Moruya, Narooma

'Tilba Winery,' the sign said. I met Val and Janine, parked the van at the 'barn' which was the first place Val and Janine built when arriving here. I surveyed the painting job and spent my first night in a real bed since I started travelling (a week ago). There was an outside 'loo', with a modern toilet inside. The 'door' consisted of a passionfruit vine, very neatly arranged by nature, which has to be lifted aside to get in, with great views of Mount Dromedary to the west.

I am preparing, sealing and painting small, timber Federation style windows. On my days off, I would travel around the district in the van — Carumba then Bermagui.



Tony and Jenny are WWOOF hosts, and Colin met up with them at the Candelo market where they run a stall selling bushfoods.

There were bad fires along most of the coastline from Sydney to Bermagui, so I couldn't see much of the ocean or hills for the smoke. Back through Central Tilba, a National Trust village.

I was writing on the verandah this morning, when out of the corner of my eye a lyrebird walks past. My camera is on the bed, so I move cautiously, but the bird moves away. Then a loud squawk! High in a tree, it was telling others to beware, as five metres away was this huge two metre perentie lizard, which wandered away before I could photograph it — it was the biggest I'd seen in all my travels throughout Australia!

Val later remarked that on an old PMG (Telstra) map of the area, were the words 'Beware of Man eating dragon in this area'.

The Wonga pigeon is calling, with its single, monotonous Woop! Woop! Woop! One day, I walked to the shower behind the barn, on the edge of the forest. I only had my towel and soap, and here's this unusual snake directly in the path. I stopped and eyed it, but it wasn't going to go. Then it rang bells in my head — it was a banded tiger snake, one of the more aggressive variety! Val had told me they were in the area, and it just wasn't going to move. So I did the sensible thing, I backed away, went for the camera, and took two photos of it, later telling Val and Janine of the encounter.

On to Candelo

Eleven days later, when the windows were done, I said good bye to my hosts and stopped at Cobargo, a National Trust town. I tried to visualise the past era, circa 1850, the people, their lives, houses and their work. There were hardships then, sure, but this life in the raw, and as yet untamed country was all they knew.

I rang another host, at Candelo, asking would she have any work? I mentioned I had my own accommodation, and could paint. Those words 'opened the door' and she said to be at the Candelo markets at 10:00 am, where she would meet me.

I'd heard of Candelo before and it's another historic village. I met hosts, Tony and Jenny at the markets, where they had a stall of bushfoods. I wandered around enjoying all. Tony is a great mechanic, so I told him of the 'crook engine' in my van, and later, he put a gizmo meter on the fuel pump, said it was half a turn out, and 'fixed' it. What a difference!



Colin had three lovely days on a 2.5 acre property, painting a garage door and timber battens, with kangaroos and two small orphaned wallabies wanting to put their noses in the paint tin.

Painting again: huge bush poles, five metres long, half a metre round. They were lifted onto a table with a chain block, scrubbed and when dry, sanded, painted with a sealant (that brought out the lustre). These 22 poles were needed later for the main posts in the new mudbrick house the hosts were building.

I'd enjoyed a trip to the bush earlier where the last few logs were to be loaded onto the seemingly — to me — rather small box trailer, of two metres. The poles were 50 metres up a steep hill, barked, ready to load, but where is the crane?

After saying g'day to the two bush 'characters' who were there, we wandered up the hill. They, with only a crow bar and a piece of rope, me with my camera. They secured the rope around the butt end of the log, placing the bar through the rope and with one man each side, 'just' walked the log down hill, then rolled it onto the table drain at the side of the box trailer. Incredible, I thought, but how were they going to get it up, and into the trailer?

More bush knowledge, they 'jacked up' the log, by using the bar, chocking it up with other smaller logs, till it was slightly above the top of the trailer, placing small poles from the trailer to the underneath of the log, and simply rolling the log downhill, and on to the trailer, me pulling, with the aid of a piece of rope, and tying it on.

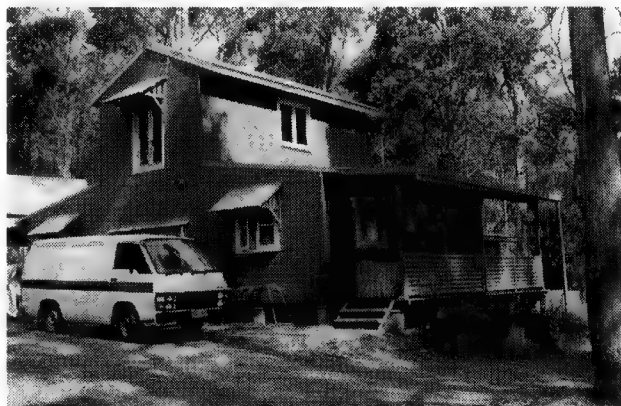
I took a series of 'posed' photographs, depicting the whole operation. It wasn't unlike the early days, when they were using bullock teams and bush ingenuity. I smiled, and nodded my head to the men, in silent admiration, the men nodded back, grinning, no words were needed. The last few poles were soon treated and stacked ready for the

house. I'll come past this way later, to see them in the house, just beautiful!

I repainted the old green house that had stored the mudbricks, and generally kept busy — all that we did eased the load from the hosts. On a trip around the area I found the Tathra jetty, with its café in the old boat storage shed of early days. I'd had 11 good days here at Candelo, so now I'm off to see some friends I hadn't seen since they were on the yacht, about seven years ago. I met them at the Candelo show and had been invited to see their 'new acreage' and mudbrick house at Wolumla, 15 km away. I went — it was a dream come true, built by the family.

The campervan was a dream also with the expert touch by Tony. I found my hand wandering to the gear lever, ready to change, but not needing to, so decided to go further afield. After a morning at the mudbrick house with my 'lost' friends, I moved on to Eden, later crossing the border into Victoria, and having afternoon tea in a rainforest. To be continued next issue where I meet the 'Team from WWOOF'.

- Wwoofing is a cheap and cheerful way to see Australia. Many people also use it to try an area or way of life before plunging in. Whether as a wwoofers or a host, give it a go. Contact: WWOOF Australia, W Tree, Buchan, Victoria, 3885, phone (03) 5155 0218.



Fabulous wwoofers' quarters on one of the properties Colin visited south of Sydney (his campervan is in front).

Ask the Wildlife Doctor

by Dr Barry Traill

Chiltern, Victoria.

Want to know how you can get your local wildlife to love you? Living harmoniously with Nature means learning how to encourage wildlife and their habitat. *Earth Garden* encourages any reader to contact our very own specialist, Dr Barry Traill. Write to *Earth Garden*, PO Box 2, Trentham, Victoria, 3458, fax (03) 5424 1743 or email <info@earthgarden.com.au>.



Selectively logging brigalow?

Dear Barry,

I have just bought 300 acres near Roma, in central Queensland. It's covered with native vegetation (native cypress pine and ironbarks). Some of it is regenerating, some mature. My intention is to implement a Private Forestry program integrated with plantings of habitat trees. Do you have any suggested readings or information sources on determining what habitat trees to plant for this area? I do have a full copy of the Regional Vegetation Management plan for my area (brigalow region). Thanks in advance for any information you can provide.
Derek, Brisbane.

Dear Derek,

Sometime, somewhere I read of a Maori practice of only keeping the *small* fish when they fished for snapper — the bigger ones were put back. I hope this isn't a modern myth I absorbed but did actually happen (I'd be interested in hearing from any EG readers who know more of it). In any case this is brilliant fisheries management. Most fisheries work on the reverse principle of taking the big fish and leaving the small youthful ones. But the large fish are the ones that produce by far the most eggs. If you take only small ones and as long as a few young get through to adulthood and all the adults can keep growing and churning out eggs — you have a sustainable fishery.

Logging in Australia has largely been the reverse of this. The big trees are mined out and then there is the hope that the seedlings or remaining smaller trees will grow quickly enough to keep an industry sustainable. Almost always that hope has dismally failed, especially in the drier forests like yours with their slow growth rates.

I realise that I'm answering a question you haven't asked — but it's probably the crucial one for your block — how much and how many trees will you be taking for your logging program? This is likely to be the management decision you'll make which will impact most on wildlife.

To explain more: the brigalow country is at the northern end of the great swathe of 'temperate' woodlands that sweep south to Victoria and South Australia. These woodlands occur inland of the Great Dividing Range and include trees such as ironbarks and box eucalypts. In the southern States clearing has largely removed the woodlands and many woodland species are now regionally extinct or declining. However, in parts of Queensland there are large blocks left — with their full complement of diversity. And let's hope the controls on clearing promised by the Queensland Premier in December last year will come to fruition and keep it that way.

From your description it sounds like your land is typical of large areas of remaining woodland and forest: lots of younger trees, especially young native pines, and depending on the logging history some or many older mature trees.

Absolutely, absolutely, the most important thing for wildlife diversity is to keep and/or grow big mature trees: these are the drivers of diversity in woodlands like yours. They produce more seeds and nectar, they have dead wood used by lots of critters to feed on or in, and they have hollows needed by lots of owls, parrots, gliders, bats, lizards, frogs and so on to nest and shelter in. For example over 20 per cent — one in five — Australian land birds have to have hollows to nest in. Most eucalypts only produce hollows at greater than 150 years or more.

The more big trees you have the greater the amount of food and shelter there will be for most species. Size does matter. And more big trees are better.

I labour this point because there remains a persistent myth still perpetrated by the logging industry that creating a 'mosaic' of differently aged habitats (areas that have been logged at different times) will favour different species, thereby maximising wildlife diversity. Unfortunately for the wildlife this theory isn't correct. There are many species that do require older forests and woodlands with mature trees. There are also many generalist species of native birds, mammals and reptiles that do well in forests of

young trees — they don't have to feed or shelter in hollows, dead wood or other attributes found only in forests with mature trees. But all these generalist species do just fine in forests with mature trees as well.

In other words there are lots of specialist species which need mature trees. There are lots of generalist species that live in forest of any age. But there are none — literally *no* forest or woodland animal species we know of which *have to have forests of younger age* produced following a fire or logging (though there are some heathland species).

On the ground this means that younger forests have a subset of the full diversity of forest animals. Only mature forest or woodland maintains the full diversity.

Growth rates in the western dry forests and woodlands are extremely slow. Despite working in these habitats for 20 years I have yet to see a truly sustainable operation of any significant size. The extremely slow growth rates in the area mean that most logging in the western country is done unsustainably. There are lots of trees but growth rates are extremely slow, so there is a strong tendency by forest managers to overcut — by taking the biggest trees, then coming back in a decade and taking the next biggest trees, and so on. The net effect over time is that tree sizes get progressively smaller, and native animals that need large mature trees start to decline and then become locally extinct.

In only a few private properties (like yours) where there are very careful managers taking small amounts of wood would I describe it as sustainable. These people didn't take the big trees — they took the adolescents.

So instead of cutting the big trees — which will be hundreds of years old and provide the crucial habitat for a lot of rare beasts — try cutting only the smaller trees, say up to 40 or 50 cm diameter. Then if you do overcut, the time for the forest to recover is shorter.

Back to the question

But back to your block Derek, and to actually answer your question. My advice on regeneration and replanting is to do nothing but watch for some time. Sit on the block for a season or five. You'll get a better feel for what's happen-

ing and what, if anything, you need to do. I call this the stubby and chair strategy.

Often people get a block and want to do something, such as replanting, because they are understandably excited by the possibilities and have lots of energy to get stuck in. However, if the bush is coming back by itself after taking a few knocks then you may only need to kill any weeds and ferals and let the country repair itself. I probably wouldn't therefore worry about habitat trees. Replanting, especially in pine and ironbark country, which live on poorer soils, with fewer weeds, is usually not needed.

That said if you have spare time and energy you might like to leave the deck chair and try two things.

Firstly fire — try some 'management' burns in small areas at different times of the year. This may help thin out dense thickets of the cypress pine and promote regeneration of some different groundcover plants. This shouldn't be too hard if you can get help from the local fire brigade or have a mate with a grader to put in some temporary fire breaks.

Secondly, try some grazing exclusion plots: just get a bit of chicken wire mesh and fence out some small plots in different areas. This will allow you to judge what effect grazing pressure from roos, wallabies, pigs, rabbits, hares, stray cows, and so on, may be having. If dingos have been wiped out in your district then overgrazing by kangaroos or wallabies could be a potential problem for some understorey plants, especially in drought years such as you've just had.

Enjoy your wonderful land! Barry.

What about bardi grubs?

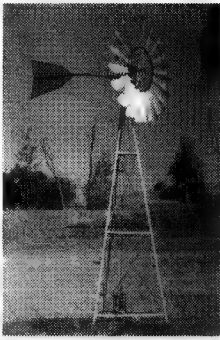
Dear Barry,

I've been a keen fisherman on the Murray River all my life. Since boyhood I've collected bardi grubs because these are the best of baits for Murray cod. When I was a boy we'd collect many hundreds of them every year, finding their tunnels under grey box trees and carefully teasing them out. Would you be able to tell me anything about their life underground? What I do know is that the big adult moths come out with the autumn rains here. What is the moth called properly? Do the moths lay their eggs in the



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trees? How do baby caterpillars tunnel in and how long do they stay underground for? Any information you have would be appreciated.

Rob, Chiltern.

Dear Rob,

When I was studying gliding possums I used to look forward to these huge adult moths coming out with the first decent autumn rains. The female moths would lumber through the woodland where I was working and the sugar and squirrel gliders would hunt them down in a mad frenzy. The gliders would dive onto the ground to grab them and scarf down their big caviar-filled bodies.

Bardi grub is sometimes the name given to some wood boring beetle larvae (which are also very tasty). But the name in northern Victoria is usually given to your big grub and moth *Trictena atripalpis*, deeply loved by you and most Murray River fishers. Like most insects it has no agreed common name. The most regular one is simply 'bardi grub' after the caterpillar stage. 'Ghost moth' is the name usually given to the family (*Hepia-lidae*) of moths to which this species belongs.

As for most invertebrates there hasn't been a lot of study but what I have been able to glean is quite extraordinary. The cycle starts with the autumn rains when the caterpillars burrow out of the soil, split out of their pupa cases and emerge as giant moths. The females are absolutely extraordinary — flying abdomens filled with eggs. They currently hold the *world record* for fecundity for a non-social insect (that is, not an ant or bee queen) of up to 40,000 eggs per female! Certainly when I've touched them eggs literally spurt out.

The females seem to lay their eggs while actually flying, blundering along over the ground at night just dropping eggs. It's not known what happens after hatching.

Presumably the tiny hatchling caterpillars burrow into the rain-softened soil and start their life as a bardi grub eating tree roots. How long they stay underground I don't know. The references are silent on that point, which probably means no one knows. Certainly cicada larvae which have a similar lifestyle and diet stay underground slowly growing for years, so bardi grubs may do the same. Chewing tree roots probably isn't a very nutritious diet so it may take years to sit in the soil and get enough protein to grow to full size as a huge, Murray cod-attracting grub.

If you would like to look at some pictures of the moth and have a look at the available information, type in '*Trictena atripalpis*' in the Google search engine on the Internet. Don Herbison-Evans and Stella Crossley have a good website with the available information.

May your years continue to be filled with grubs!
Regards, Barry.

Avon River controversy

Dear EG crew,

I was less than delighted to read the silly, bigoted comments of Barry Traill on the name of Avon (EG 124). I have in the last few days seen both Avon rivers in this part of the world. Has Barry never heard of Stratford-Upon-Avon? A noble and beautiful river. Also, yesterday we travelled via Bristol to see old friends and saw that River Avon too;

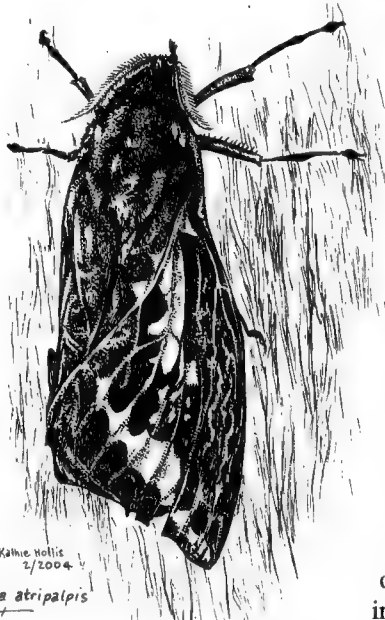
again a noble river with a wide estuary. Barry wouldn't be giving in to anti-Pom sentiments now, would he? I can't help feeling that a retraction of his comments would be in order; I certainly found them offensive. Regards to you all. Anne and John Jessop, Cotswolds, England.

Jane Norton of Bundaberg in Queensland has also written, accusing Dr Traill of "cheap-shot, xenophobic comments". We did not have space to print Jane's letter in full.

Dr Traill replies . . .

"Xenophobic? Please Explain?!" (Sorry, Queenslander in me coming out.) Xenophobic is probably a bit harsh I thought, but I'm happy to accept that it was a cheap shot at things English — and I do apologise.

However, I'm not excited by Jane Norton's theory of "nature loving Celts" pioneering Australia. All my forebears settled in Gippsland and most were of Celtic stock. One was almost certainly a murderer of the indigenous owners of the land he wanted and all of them became dab hands with an axe in Gippsland mountain valleys. The Anglo-Celt pioneers in Oz did what they did to get on in life, but gee whiz, calling them nature lovers is re-writing the history a bit!



Trictena atripalpis

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Green Electricity Watch

Second Report – September 2003

Australia's biggest source of Greenhouse gas pollution is electricity production. This is responsible for more Greenhouse gases than anything else in Australia. You can help fix the problem by making a switch to a cleaner electricity retailer. To help you make the switch, Australia's environment groups asked the companies that sell you electricity what they are doing to address climate change. The retailers were surveyed about the Green Power products they offer. Thirteen of Australia's 14 electricity retailers participated in the survey. The leaders showed a strong commitment to responsible environmental policy, together with actual renewable energy and energy efficient practice. They have Green Power products that exceed the accreditation requirements.

Nearly all electricity retailers allow you to purchase electricity from renewable energy sources like wind, solar or hydro. If you choose Green Power, your retailer is obliged to purchase the amount of energy that you use from renewable energy projects. Your choice will help Australia to move away from dirty, polluting coal. Most of the products listed here meet the minimum environmental guidelines set by the National Green Power Accreditation Program: the energy comes from approved generators (solar, wind, biomass, hydro and geothermal); no native wood products are used as fuel, and 80 per cent of the electricity is from new (post-1997) renewable generation. The 80 per cent rule is vital as it is

new generation which increases demand and investment in alternative energy sources.

You can choose the percentage of your electricity consumption that will be from Green Power — typically from 10 to 100 per cent, with the balance made up from the standard electricity supply. If you want to ensure that all your electricity is from Green Power then you need to ask for 100 per cent. For more information about Green Power phone 13 62 06 or visit the website: <www.greenpower.com.au>.

• Green Electricity Watch was formed from the co-operation of some of Australia's leading environment groups all of whom are committed to reducing Australia's Greenhouse pollution through positive change. For more information, or if you live in an area supplied by only one retailer then see <www.electricitywatch.org> for ways to encourage your retailer to improve their performance.

- ✓ Supports the Greenhouse gas reduction policies needed to tackle climate change
- ✓ Supports only some of the Greenhouse gas reduction policies needed to tackle climate change
- ✚ Supports practices that educate and enable energy efficiency and demand management
- ✚ Supports only some practices that educate and enable energy efficiency and demand management
- ✗ Offers customers renewable energy choices that are all Green Power accredited
- ✗ Offers clean energy choices, some of which are Green Power accredited but also has non-accredited product.

Electricity Retailers Corporate Environmental Performance			Corporate Policy	Energy Services	Green Power
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2 Origin Energy 13 24 63	NSW, VIC, SA		✓	✚	✗
3 Integral Energy 131 081	NSW	Above average environmental policy and practice	✓	✚	✗
4 AusPower 03 9207 2345	All states (Large customers only*)			✚	✗
5 Country Energy 13 23 56	NSW, VIC, ACT		✓	✚	✗
6 EnergyAustralia 13 15 35	NSW, VIC	Average environmental policy and practice	✓	✚	✗
7 Ergon Energy 13 10 46	Regional QLD			✚	✗
8 ActewAGL Retail 13 14 93	NSW, ACT			✚	✗
9 AGL 13 12 45	NSW, SA, VIC				✗
10 ENERGEX 13 12 53	Sth East QLD				✗
11 Western Power 13 13 53	WA	Below average environmental policy and practice			✗
12 TXU 13 34 66	VIC, SA			✚	✗
13 Power and Water 1800 245 091	NT		✓		
14 Aurora Energy 1300 132 007	TAS	Declined to participate			

Uncommon Fruits & Vegies



Founding editor of *Earth Garden*, Keith Smith, continues his regular column about the history — and how to grow — fascinating fruit and vegetables you won't find at your supermarket.

SEEDS OF THE SUN

by Keith Smith

Blue Mountains, New South Wales.

A FIELD of sunflowers is a marvellous sight. With their golden disc heads, like giant daisies or marigolds, sunflowers are beautiful, showy plants. They grow vigorously, with tall hairy stems, rough toothed leaves and yellow-orange flower heads packed with circular rows of edible seeds.

While the ancient Egyptians worshipped the sun god Ra, Inca priestesses in the Temple of the Sun in Cuzco carried golden sunflowers and wore gold crowns embossed with images of sunflowers. For that reason the Spanish conquistadors of Peru at first named the annual sunflower (*Helianthus annuus*) the Flower of Peru or Herb of the Sun.

Although wild plants grew throughout the temperate areas of North America, botanists consider that sunflowers originated in Mexico. The first Europeans to arrive in the New World in the 15th century found sunflowers cultivated by Native Americans from southern Canada to Mexico, where Aztecs grew small-seeded types. Writing in 1590, Englishman Thomas Hariot described sunflowers he found in Roanoke, Virginia: "There is another great herb, in the form of a marigold, about six foot in height, the head with the flower is a span in breadth. Of the seeds hereof they (Native Americans) make both a kinde of bread and broth."

The Spanish took sunflower seeds to Europe from the Americas and they grew and flourished in 16th century Spanish and Italian gardens. The plants were introduced to England during the reign of Queen Elizabeth 1. English speakers first heard about sunflowers in a herbal translated from Spanish with the title *Joyfull*

newes out of the newe founde worlde (1577). In this work botanist Nicolas Monardes, said the face of the 'Hearbe of the Sunne' followed the sun at all times of the day. In his famous *Herball* (1597), John Gerard disputed this claim.

"Those that have reported it to turne with the Sun, the which I could never observe, although I have indeavoured to find out the truth of it; but I rather thinke it was so called because it doth resemble the radiant beames of the Sun . . ." In fact, young sunflower plants do turn their faces to follow the sun, but usually only during the morning.

In the 18th century, Tsar Peter the Great took sunflowers from Holland to Russia, where they are now the most important oil crop. Over time, the oil content of small, black-seeded Russian sunflowers was increased, from about 28 per cent to 50 per cent. In Australia, hybrid sunflower types have dramatically increased yields and dominate commercial oil crops in areas such as the Darling Downs in Queensland. Sunflower oil has even been used as diesel fuel.



"Flos Solis maior. The greater Sunne flower."
From John Gerard, *The Herball*, London, 1597.

Sunflower seeds are nutritious, containing 25 to 30 per cent protein (equal to meat) and vitamins A, B complex and E in saturated oils. The oil is light yellow, without much taste, and therefore ideal for cooking or salad oil. It is rich in lecithin and unsaturated fatty acids and also contains traces of calcium, magnesium and potassium. The most basic food from sunflowers are the young, delicate sprouts, produced simply by regularly rinsing seeds in a colander with water for a few days. They're great in salads.

Crunchy sunflower seeds are eaten whole, usually hulled, as a snack. You can roast seeds in the husk, add salt and eat them like peanuts. Try removing seed hulls with your fingers (practice makes perfect) or even an old wooden clothes peg. Unhulled seeds keep well and lose few vitamins in storage. Store sunflower seeds in airtight jars when thoroughly dry. Don't waste the discarded hulls, which can be used for garden mulch or added to the compost. Seeds can be ground into sunflower seed meal to add to bread or pancake mixes.

Sunflower granola

Mix hulled sunflower seeds with any kinds of nuts, then add rolled oats, wheat, soybeans and sesame seeds. Bake for 30 minutes in the oven at 375°F, stirring occasionally.

The entire sunflower plant — stalks, green leaves and hulls — is good livestock fodder for cattle, pigs and fowls (which love them). Flowers yield a yellow dye and the pith of the stalks, which is lighter than cork, was once used to fill life jackets. It can be used to make paper.

Growing sunflowers

There are both annual and perennial sunflower types (see below). Sunflowers are hardy plants which survive in stony or sandy desert soils (and are fairly salt and drought tolerant), but succeed best in deep soil enriched with plenty of organic matter. Plants are pollinated by bees and other insects and mature in three to five months. They prefer full sun and can be planted as windbreaks around garden beds or in blocks to ensure good cross-pollination.

Sow sunflower seeds in spring about one centimetre deep and 30 centimetres apart and thin to 60 centimetres to one metre apart for tall growers. Crowd plants more closely together to suppress weeds if you want them for seed production. Side-dress plants occasionally with compost or well-rotted manure as they grow and add lime or woodash if needed. You will have to compete with hungry birds pecking at ripening seeds from the outer rims of the flowers. Protect seedheads with cloth, cheesecloth, paper bags, old pillowslips or stockings. As they start to turn yellow at the back, cut off flowerheads with about 30 centimetres of stalk attached and hang them upside down in a dry, airy place, like a shed or attic. Rub off the seeds when dry.

Sunflowers make good companion plants for maize (sweet corn) and deter maize armyworm. Twinning beans

and cucumbers grow well when planted to climb sunflower stalks. Potatoes, however, are not good companions to sunflowers, as both plants stunt each other's growth.

Varieties

'Dwarf' (*Helianthus decapetalus*), is a dwarf perennial growing to 2.5 metres and forming large, bushy plants with multiple stems and flowerheads. Ideal for cut flowers.

'Giant Sunflower' (*H giganteus*). This is a tall, elegant and strong growing perennial plant carrying a large deep yellow head packed with big seeds. Late bearing.

'Hopi Black Dye'. Flowers yield the black seeds used by Hopi Indians to dye baskets and wool.

'Mammoth Russian'. Introduced about 1880, this annual variety is the most popular in home gardens. The largest and tallest sunflower, it reaches three to four metres in height. Big, firm flower heads bear striped seeds that are thin-shelled and meaty.

'Maximilian' (*H Maximiliani*). This is a hardy perennial reaching three metres. The Sioux ate the tubers, which resemble Jerusalem artichokes.

'Manchurian'. A long season, heavy yielding, giant sunflower with grey striped seeds and a smaller head than

'Mammoth Russian'.

'Striped'. This is a tall stemmed variety with a large seedhead and thin-shelled seeds.

'Tarahumara'. This solid gold dwarf sunflower on one metre high stalks has unique white hulls and seeds and is grown by the Tarahumara Indians near Chihuahua in Mexico. It is not an ancient variety, but was obtained from Mennonite farmers. Leaves are dried to use as a tobacco substitute.

• **Keith Smith is the co-author (with Irene Smith) of *Grow your own Bushfoods*, published by New Holland.**



When growing sunflowers in a home garden you will have to compete with hungry birds pecking at ripening seeds from the outer rims of the flowers.

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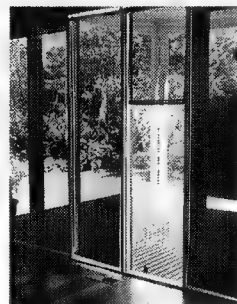
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RANDOM RUBBLE STONework

THE THREE-DIMENSIONAL JIGSAW PUZZLE

Earth Garden's longtime owner building guru, Bob Rich, explains some of the satisfaction of laying random rubble stone walls.

by Bob Rich

Moora Moora Community, via Healesville, Victoria.

LAYING up a random rubble stone wall is my favourite building activity. It may be physically hard work, and slow compared to other techniques, but it's *fun*. And what you produce is solid, and lasts about forever.

Principles

A good stone wall would stand there, solid and stable, even without mortar. Every stone should be kept in place by gravity. It's perfectly acceptable to help this along with little stone fragments wedged into the right places. The old stone builders had the rule: "Two on one, one on two". This means that, as far as possible, every vertical join between two stones should be capped by a stone above. This is hard to do sometimes (for example above the top row!). Because stones vary in size, it is sometimes necessary to put a few smaller stones above each other next to a large one. Otherwise, keep to this rule.

'Bond stones' are those long enough to span the thickness of the wall. They are good to use as frequently as you can find them. Where two or more stones make up the thickness, they should be 'falling inwards', leaning on each other.

But the most important consideration is thinking ahead. Before choosing a stone to fill a gap, you need to visualise the surface you are creating above it. It should not be sloping from the centre to the edge, or else how can you lay a stable stone upon it? So, rubble stone laying is a little like chess: you need to be a few steps ahead.

A skilled stone layer will work at several locations at the same time. Each will require a somewhat similar stone. So, I look at a gap, and go to seek a stone to suit. If it doesn't quite, it will probably go into one of the other growing spots.

Appearance

If the wall is to form part of a house, its inside surface should be flush. I achieve this by bracing an old door to the vertical, and laying the stone wall up against it.

Some people make the outside equally flat, and this is fine. Just realise that, unless your stone is easy to split, you are hugely increasing the time it will take to complete your wall. To my eye, rough is actually more attractive. We have a coarse, rough, irregular building material that looks great in a solid wall with an uneven vertical face. One thing you should never do: start fine, with a flat face and narrow, even mortar joints, and when you lose patience, finish more roughly. That looks *terrible*.

The photos here show three rubble stone walls, all at Moora



Bob Rich and Willow Lamb share a laugh as they place rocks in a random stone wall at Moora Moora Community.



A current building project is to build a rubble stone fence at each side of the Moora Moora Community front entrance. Bob believes that a good stone wall would stand there, solid and stable, even without mortar.

Moora Community. But there is also a current building project: to build a rubble stone fence at each side of our front entrance. It has been a source of enjoyment, learning, and physical exercise for several people who had never before built in stone.

• You can see this wall, and the buildings too, if you come to a regular Open Day at Moora Moora Community. They are held on the first Sunday of each month, at 1 pm. For directions, contact the Membership Committee, Moora Moora, LPO Box 214 Healesville, Victoria, 3777, or send Bob an email at: <bobrich@bobswriting.com>.

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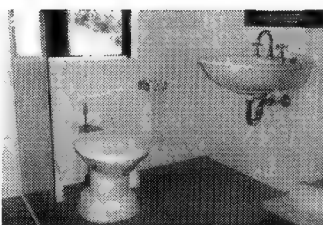
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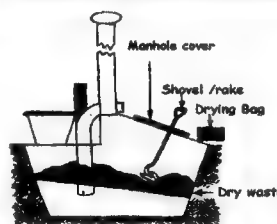
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Build Kate's *Deluxe* Branch Breaker

Kate's brilliant invention breaks ten to 30 mm diameter branches easily, so you can get a quick and easy supply of perfect-length branches to feed your wood stove or heater.

by Allan James and Kate O'Dwyer

Stanthorpe, Queensland.

WE read with interest Ross Lane's article on his Sawjaw (in EG 123) that makes cutting fire wood easier. We, like Ross, are always coming up with ideas to make life on the land easier, so a few years ago we made a gadget that breaks small, dry branches into useable lengths for starting our Everhot combustion stove. You know the size. Between ten mm and 30 mm in diameter, that you place above the dry leaves and twigs, but below the solid firewood pieces. Branches that are too small to cut with a chain saw, but come up and smack you in the face if you hit them with an axe. We have plenty of these just lying on the forest floor under the big gum trees. Our branch breaker simply snaps these dry, brittle, straight branches quickly and safely into the lengths you need for your firebox.

You can easily build a branch breaker yourself if you have a hacksaw, drill and welder. If you do not then a mate could build it for you. Basically it is just two fixed cutters made from two pieces of 250 mm long star picket screwed

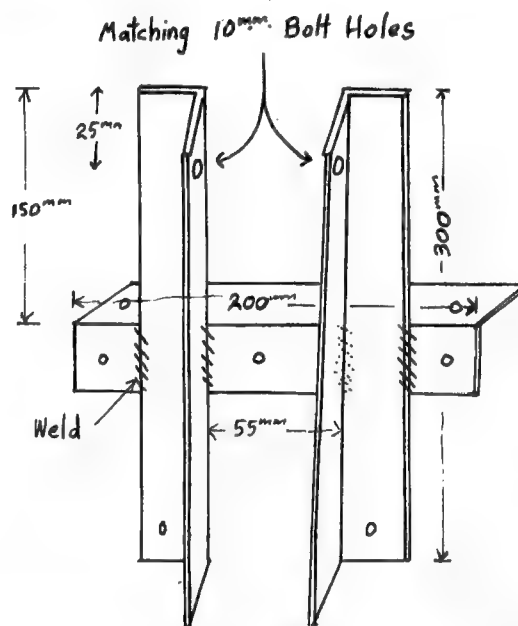


Figure 1. Weld two long angles 55 mm apart. All the other holes are to accept roofing screws or coach bolts for attaching this to the stump.

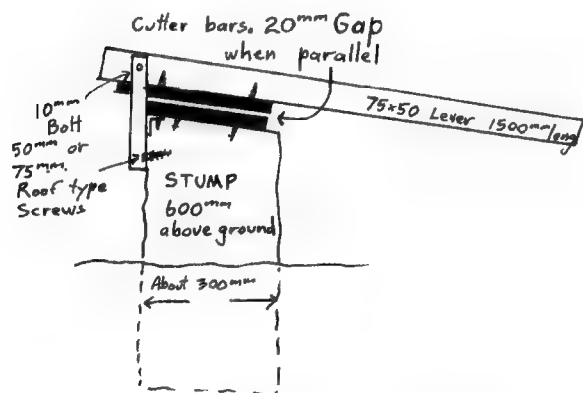


Figure 2. A slight slope on the stump helps.

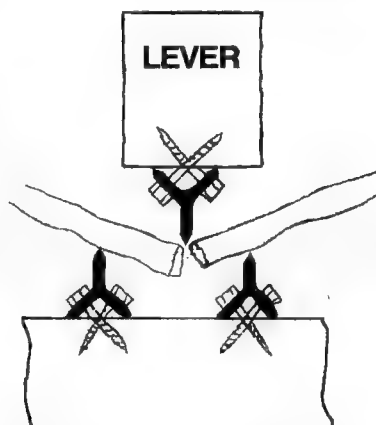


Figure 3. Kate's branch breaker is so useful that you'll wish you'd built one sooner.

170 mm apart on top of a solid stump. Also screwed to the stump is an angle iron bracket (figure 1) from which a 1500 mm long piece of 75 mm x 50 mm timber, which acts as a lever, swivels on a 10 mm diameter bolt. A single 400 mm long (star picket) cutter bar is screwed under the wooden lever and snaps the branches that are laid across the cutters on the stump.

Some points that are important if you make a branch breaker for yourself: make everything strong — the welds, screw sizes and so on, because the leverage is powerful. A slight slope on the stump helps and a gap of 20 mm between the cutters when they are parallel seems to work well, so drill your 10 mm hole in the lever accordingly to achieve this spacing (see figure 2). Make sure the top 400 mm long single cutter bar extends well past the swivel point for extra strength. The cutter bars are attached with 50 mm roof screws at an angle so the long flange on the star picket is the actual breaker edge (figure 3). Stagger the screw holes in the star picket so the roofing screws don't clash.

Use 40 mm or 50 mm angle iron (old bed frames are suitable). Set your stump solidly into the ground in a convenient place so you can easily stack the pile of broken branches under cover.

Breaking the branches

To break the branches we simply feed the brittle branches in with our left hand while working the lever with our right hand. It is quick and safe as no wood flies through the air. Long branches can be fed into the branch breaker by a second person if necessary. We even have a longer lever that we can use for larger diameter branches, but this puts a big strain on the welds and screws. Green branches won't snap and bushy branches are a pain, so we just concentrate on bringing home a bundle of good straight sticks whenever we go for a walk in the bush.

To light our Everhot, first we give it a good riddle to clear the ash and airways, then we simply load a sheet of



Cindy and Chris assembling a good pile of branches for the Everhot using Kate's branch breaker.

newspaper with dry leaves and twigs, stuff this into the firebox, then load our broken branches on to this and our larger firewood on top. With the controls set — oven to low, fire to high, flue to open — we light the paper. When burning well, we can then put the oven to high if we want to use that. We light our stove late each afternoon to cook dinner and to make hot water for showers. As we don't need to keep the stove burning 24 hours a day we rarely bank it down: when you do this it doesn't burn the wood properly and this causes smoke and pollution and can clog your chimney. A small camping stove is useful during the day if we need to fry an egg or the electric kettle if someone visits and needs a cuppa.

Good luck with your branch breaker. Ours is so useful that we wish we had built one sooner!

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Snakes Alive, or not . . .

Rosemary relates a interesting tale about vegie gardening with cold blooded visitors.

by Rosemary Hill

Heathcote, Victoria.

OUR first scare with the local snake population was while we were still weekenders. Being very keen on growing our own and it being a year of sufficient rainfall to allow a vegie garden, I spent a large part of my weekend encouraging a few leafy greens and straggly zucchinis to do their best. Keenly following the latest in organic, Earth Garden-inspired gardening practices, each garden bed was piled high with pea straw and lucerne. Given the price of lucerne in the 2003 summer drought, I shudder at what now seems a criminal misuse of valuable fodder — but those were the times. The lack of fertility under all that mulch is something that eventually would require action, but that is another story. Suffice to say, there were a lot of layers of straw on the vegie beds.

It was after lunch on Sunday afternoon. We would soon be heading back to town so, as usual, I was trying to get a hundred and one things done before we left. Millie, the kelpie, was outside with me, generally hanging about and enjoying her relative freedom. After a while I noticed she was intently focussed on something at the far end of the biggest garden bed.

Since we had been there we had encountered many small lizards, about three or four inches (7.5 to 10 cm) long, that appeared to live in the garden. These little lizards enjoyed sunning themselves on a nice afternoon, out-stretched on a zucchini leaf or similar. They had, of course, been of great concern to Millie, who saw it as her duty to keep all these invaders out of her domain.

Assuming that one of these small creatures was the cause of her current concern, I grudgingly decided to intervene on behalf of the local resident. I was annoyed, though, that precious weekend minutes were to be wasted sorting this out. What I saw as I approached vanquished all such minor vexations from my mind.

Having spent much time at Yandoit and now many

weekends at Heathcote we had been fortunate not to have any close encounters with snakes during our travels. On a trip to Rottnest Island a few years previously, snakes were a common feature as we cycled around the island. However as they were generally sunning themselves in the middle of sealed roads and could be seen hundreds of metres ahead, thus easily avoidable, they caused only minimal fear.

This was a different story. Not one metre from where I was now standing, curving out and back into the straw, was a length of brown-scaly-reptilian-looking . . . something.

Now I ask you, what would you think? I know what I thought. Having heard many horror tales of dogs worrying and been bitten by snakes, getting Millie out the way — quickly, quietly and safely — was my first concern. As her focus was still forward and therefore oblivious to me, grabbing her by the collar and hauling her off wasn't so hard. She wasn't happy, but I was relieved that at least that

possibility had been avoided.

What next?

The next steps to take weren't so obvious. It appeared to me that I had a choice. Ignore what I had just seen, say nothing, pack up, go back to town and hope it will have gone away by the next weekend. Tempting as this was — and it was very tempting — I wasn't sure that if I took this course of action I would ever be able to face going into the vegie garden again. That was something I did not want. However, as soon as I acknowledged what I suspected, I knew I

would be committed to act.

I decided not to rush such an important decision. Keeping a very tight hold on the dog's collar, I went inside. Once the door was securely shut, we proceeded through the house to where Alice was working on her latest quilting project. Still trying to decide if I could take the coward's option and pretend all was well, I asked how it was all going and probably made some suitably appreciative noises about the latest progress.

Finally, amid internal turmoil, I decided that it would



Alice Petherbridge (left) and Rosemary Hill in the vegie garden at Heathcote in central Victoria surrounded by flourishing greens.

be unwise to ignore the brown-scaly-reptilian-looking thing. I was by this time, also seriously rethinking my enthusiastic use of large amounts of straw mulch.

Wanting to get my point across, but appear calm and in control at the same time, I adapted a line from Apollo 13: "Alice, we have a problem." Having by this time been sitting there for several minutes already, this may have appeared just a little odd. As I briefly described the lead up to, and the discovery of, the brown-scaly-reptilian-looking something, Alice continued to sew. It is apparently a fallacy that ostriches stick their heads in the ground, but sometimes I can understand the appeal.

Having finished her seam, there being no other pressing matters, like the house spontaneously catching fire, a Puckapunyal practice session over-shooting their target or even the phone ringing, we started to discuss options. Unfortunately there weren't any.

So allowing common sense to prevail, that is, we knew neither of us would ever go out there again if we didn't face up to it there and then, we planned our strategy.

I had for a number of years kept bees. This is something that seemed a good idea at the time, a use for my previous place at Yandoit elsewhere in central Victoria. My increasingly allergic reaction to stings and associated loss of nerve did turn a pleasant activity into a nightmarish burden, but that was later. The point being here though, I had all my protective beekeeping gear with me.

Now you may be aware that bee stings and snake bites are a little different, but faced with the choice of going out with some protective clothing — albeit for a different peril — or as I was, I decided the former was a better option.

So, in full head-to-toe beekeeper's suit, knee-high gumboots and armed with my favourite torpedo hoe imported from New Zealand (you can't get them in Australia and they really are very useful and only decapitate a few plants when you are getting used to their slide) we headed for the vegie garden.

Now the thing about country living is, it's different from city living. That may seem an obvious statement but think about some of the implications for a keen gardener. I am referring here to rabbits. The rabbit and its larger cousin,

the hare. In more recent times other animals have joined the ranks of nuisances amongst the vegies, namely kangaroos and wallabies. In those halcyon days though, it was only rabbits and hares that really caused a menace in the garden. So there was a fence around the vegie garden.

We wanted to get to a vantage point that was close enough to see, but far enough away, to use the full stretch of the eight foot (2.4 metre) handle on the hoe and have an escape route. To do this entailed going down past the hay shed, along the laneway, into the orchard and approaching from the far fence. Once this position was reached and, whilst preparing for action, we decided a backup plan was called for, just in case. So now there was me in full beekeeping-gardening attire, armed with trusty hoe and Alice closely following behind with hose at the ready.

Still there

Cautious inspection revealed that the problem hadn't gone away. Holding the hoe handle in both hands, I directed the head of the hoe to land on the straw a little short of the brown-scaly-reptilian-looking thing. No response. Okay, stronger action was required. I jerked it around in the straw a bit, daringly close. What appeared to be a very snake-like movement left the thing slightly further away, but still mostly hidden. Both breathing again, the action was repeated. This time it started to move toward the edge of the garden bed.

Torn between dropping the hoe, the hose, turning heel and running or, alternatively, stalwartly seeing this through, fear decided the outcome. I don't think I could have moved if I'd wanted to. Transfixed, we watched the progress as it weaved its way under that infernal straw, getting closer and closer to the garden edge. A brown-scaly-reptilian-looking head poked out, followed by a neck, and then . . . a leg.

We now know that shingle back lizards are common in these parts. These harmless creatures are even slightly comical, it being hard to distinguish their head from their tails. We also now know that because of their looks and habits, newcomers frequently mistake them for their more ominous relations.

THE BANQUET

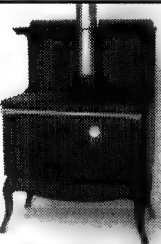
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Earth People Write continued from page 6

Freezing the harvest abundance

Dear 'Earth Garden',

Too much of anything is never really a problem. I always find that 'not enough' is harder to cope with! I use our freezer year round. We bought the largest and most energy efficient freezer we could afford and have it filled to the brim the whole time. As produce comes into season, we start to stack it away in small containers until we have enough to keep us going until the next season. Then, in the depths of winter, I can take 6 x 1 kg containers of apricots out and make almost instant apricot jam because all the fruits have been cleaned and prepared before freezing. No need to blanch before freezing. Pears, apples and nectarines need to be partly cooked and mixed with a bit of lemon juice to prevent browning. Presto! Pear crumble becomes a winter favourite.

Our goat milk production goes down in winter, while we wait for the kidding season to arrive, so I progressively freeze kilogram packs of milk until I accumulate enough milk for a batch of cheese — a large round of cheddar to enjoy next year.

And when there is absolutely no more storage room? Well then the chickens, ducks, guinea pigs and goats become fed like kings. A white guinea pig indulging in a pile of blood plums is a sight to see! Vampire pigs! Love your mag. Keep up the good work.

Corinne Blacket, Drysdale, Vic.

Tiger project's new email address

Dear 'Earth Garden',

Greetings from Alwar, Rajasthan. We have just received the Sept-November issue of the *Earth Garden*. Thank you very much for the article 'Return of the Tiger'. The literacy project supported by the Global Ecovillage Network (GEN) has now developed into a school. The literacy class for women is going on as usual. We have opened two more schools in the Nat and Kanjar villages.

The Nat and Kanjar community in Alwar district is traditionally into prostitution. There are about 20 to 25 Nat and Kanjar villages spread all over Alwar district. We have marked ten villages where we wish to open primary schools and provide basic medical facilities to the whole community and particularly to the women. The article was just in time, we are waiting for responses from concerned citizens and organisations from all over the world. We need support for our education program. We will be very happy if you could publish our new email address in the letter section of

your journal. With warm regards,
Nirvana Bodhisattva, Nirvanavan Foundation, Rajasthan, India, email: <alwartiger@rediffmail.com>.

Quarantine issues to consider

Dear editor,

I was surprised at your publication, without even a comment, of the tirade by Josef Tamaliunas against the Australian Quarantine Service in EG 125, page 58. Most of your readers will be aware of the serious problem Australia faces from plants introduced from overseas which have become disastrous weeds. Even more serious are potential problems from imported plant diseases and pests. Australia, and individual States, are still free from many diseases and pests rampant in other parts of the world. Phylloxera, in grape vines, is an example, and it is not a trifling matter as the author suggests. In order to allow importation of exotic species, quarantine measures have been devised, including certificates, fumigation and growing the plant in quarantine for a period needed to ensure that they are weed, pest and disease free. It is quite reasonable that the importer, who will get the benefits, should pay for this service. The process is not impossible for individuals; I have taken part in it on two occasions for a small plant society which imported special hybrids from the United States. All of your readers who care for our very special Australian environment will fully support the quarantine service in their efforts.

John, Safety Bay, WA.

Consultant needed

Dear editor,

I need a local contact or consultant for a property in Musk, in the Daylesford area. The advice is about: (a) perhaps a water wheel; (b) 20 acres used for grazing; (c) blackberries; (d) I might need a casual caretaker; (e) the best vegies to grow; (f) extending the house.

Rose Ladner, PO Box 87, Flinders, Victoria, 3929.

Identifying young roosters

Dear 'Earth Garden' readers,

Thanks for a great magazine. Life on acreage would not be the same without the inspiration I receive from the articles and contributions from other readers. One of the great pleasures I gain from living on the land is the ability to have free range chooks and I love to hear all the chook stories from other chook keepers. Despite the cosy nesting boxes provided my chooks insist on laying among flowers and vegies. Despite having a weatherproof roost at their disposal they prefer to roost in the mango trees. At least they are safe from foxes.

They are healthy chooks never falling prey to disease or pests and lay pretty much every day, even through winter. The rooster has a favourite chook and appears not to bother too much with the pecking order and being on the highest branch as long as he is with her. When she goes broody he leaves the mango tree and waits in the roost until she returns. Can anyone give me any tips on identifying roosters at an early age? Seems a silly question I know though so far I am only able to recognise a rooster when it attempts its first crow.

Carole Jackson, 177 Ninderry Road, Yandina, Qld 4561, email: <isoeng@bigpond.com>.

Hunting muscadine seeds (1)

Dear 'Earth Garden' and readers,

I read the great article about muscadines (*Vitis Rotundifolia*) back last September, and since then I've been trying to find the seeds — in particular for the black muscatel variety, everywhere! I already knew about their health benefits — especially the ones with the darkest skin; does anybody know where to find them by seed or share anymore information about these wonderful plants? All replies are welcome.

Yuko Konno, PO Box, 97 Deloraine, Tasmania, 7304, email: <yukoyuko1741@yahoo.co.jp>.

Muscadine seed leads (2)

Hello 'Earth Garden',

What a wonderful magazine! I am now fully addicted and have purchased a subscription. I would like to try and grow some muscadines. I have searched the net and can only find nurseries that sell plants, not seed. Could anyone please suggest some internet addresses, so that I can get some seed and start growing them. Thank you.

Helen Galea, Tasmania.

Muscadine seeds (3)

Dear 'Earth Garden',

I am after some information about an article that was in EG 125 on disease free grapes by Josef A Tamaliunas. I'm hoping that you will be able to supply me with an address so I can send away to buy some seeds. Any information would be greatly appreciated.

Veronica Van der Kolk, fax (08) 8734 8186.

Marula seeds too

Hi all,

Is it possible for you to give me the address or email of Josef Tamaliunas, who wrote an article on marula in the March/May issue? I would like to contact him to find a source of marula seed, which he mentions,

but doesn't say where to buy it. Hoping you can help with this, and thanks for your time, **Julie Woodman**, email: <julwood@iprimus.com.au>.

Josef replies . . .

The email and postal address for Silverhill Seeds is: PO Box 53108 (18 Silverhill Cr), Kenilworth, 7745, Capetown, RSA, South Africa. Attn: Rachael Saunders, email: <silverhill@yebo.co.za>. You may also like to try Fruit Spirit Botanic Park: Lot 69, Dunoos Rd, Dorrourghby, NSW, 2480, attention: Paul Recher, website: <www.nrg.com.au/~recher/seeds.html>. I can also recommend that you beg, borrow or buy a copy of: *Cornucopia II - a source book of edible plants*, by Stephen Facciol, Kampong Publications, ISBN 0-9628087-2-5. This link should also prove useful: <http://www.jludsonseeds.net/>. Mailing address: J L Hudson, Seedsman, Star Route 2, Box 33y, La Honda, California, 94020 USA. They have muscadine seeds and an excellent ethnobotanical catalogue.

—Josef.

Broom seed concerns

Dear editor,

In EG 124, Kathryn Muxford wrote asking people to send her seeds in exchange for 'native broom' seeds she can provide in return. Kathryn's letter causes me a lot of concern. Firstly, the plant she is offering seeds from as being a native plant is not native at all. It is clear from the description Kathryn gives that she is talking about the tree lucerne, Tagasaste (*Chamaecytisus proliferus*). While farmers find this plant useful as a fodder tree, it is *not* native but is in fact a serious environmental pest plant. I believe that its place of origin is the Canary Islands. It is no surprise that Kathryn's are self-seeded because it is a prolific seeder and a tenacious pest when it escapes into natural bushland.

Secondly, even if it were a native plant (which, I repeat, it isn't) then current thinking questions the wisdom of considering all Australian plants to be safe to plant any old where. There are numerous instances of plants from one part of Australia being inappropriately planted in another part of the country and becoming an environmental pest in that area. Some plants from say Queensland are just as exotic in say South Australia as oak trees, thistles or Tagasaste. 'Local provenance' is the term used to express this concept of plants and the area to which they naturally belong. Anybody developing an interest in, and knowledge of, native plants needs to take this concept on board.

The last thing I want to do is inhibit enthusiasm for our wonderful native flora but, given the record of the spread through-

out Australia of all manner of pest plants and animals since white settlement, then I think we all have a tremendous responsibility to inform ourselves better before acting. In that way, we will help to diminish a serious problem rather than help to spread the problem. Please do not plant these seeds.

Emil Kolak, Angaston, SA.

Eco Voice: excellent SA newspaper

To all South Australian readers,

Just letting you know of an excellent SA Green newspaper called *Eco Voice*. It's a free bi-monthly newspaper which has recently come into circulation. It's full of great articles and businesses all based in SA who supply and promote sustainable living — I've taken to referring to it almost as much as my *Earth Garden* magazine! As it's only *Eco Voice*'s second issue I'm not sure how widespread it is, but try your local newsagent or, if not, call them direct on (08) 8338 0033. Happy reading!

Kathryn Muxworthy, Kapunda, SA.

Dear Kathryn,

I can heartily recommend 'Eco Voice'. I was sent the first issue and am very impressed with the range of articles, link ups with like-minded small businesses throughout SA, and the energy of the publishers and editors.

—Alan.

Permaculture and education in Asia

Dear 'Earth Garden' readers,

My partner and I are making plans for a trip of a lifetime for 12 months to Thailand, Vietnam, India, Nepal and Ladakh. We both work in horticulture and education and wish to enhance our knowledge. We would appreciate if anybody could provide us with recommendations or advice on educational projects, programs, volunteer opportunities and areas of interest in sustainable horticulture, agriculture, and permaculture. We would be grateful for all suggestions and advice. Thank you for a great mag. Keep up the good work — it's making a difference to our beautiful planet.

Sonya Hemley, email: <sonya3@37.com>.

Dear Sonya,

You may be interested in the work of the Himalayan Light Foundation in Nepal and now Sri Lanka (see EG 120 and website: <www.hlf.org.np>), and the Nirvanana Foundation in Rajasthan, India (see EG 125 and 'Earth People Write' in this issue above). Both groups are working to improve the lives of village people through self-sufficiency, renewable energy, sustainable agriculture and other topics EG has covered for the past 32 years.

—Alan.



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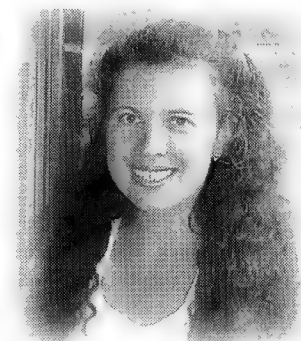
Journal of Permaculture Design Institute*

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EARTH GARDEN REVIEWS

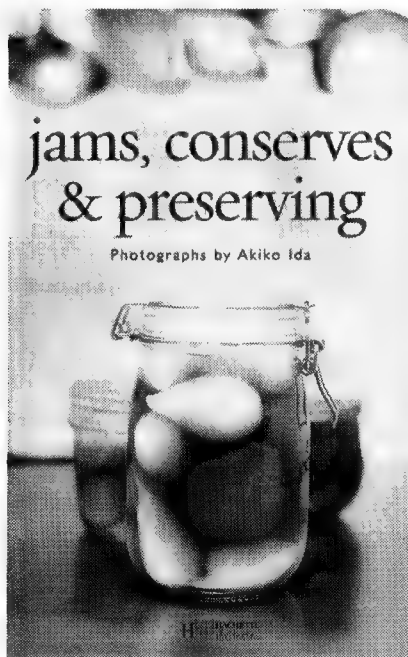
BOOKS AND MUSIC

Edited by Judith Gray



Jams, conserves & preserving
Published by Hachette
Illustrated
Large format,
full colour, soft cover,
155 pages.
\$32.95 inc GST*

If you ever thought preserving was the sort of tedious chore that a bumper crop left you with, well think again. This is a wonderfully colourful publication that will make you want to get into the 'bottling room' and create. Learn when it is necessary to use a pressure cooker, and what equipment you will need. Learn how to blanch, sterilise, bottle



and seal, and then you are under way. It is worth being fussy about the quality of the fruits and vegies you preserve. If you are lucky enough to be harvesting from your own garden the best time is in the morning, after the dew has evaporated but before the sun gets hot. Don't pick in wet weather and ideally, harvest early in the season.

Chapters include using olive oil, drying in salt, perfect vegetables, summer fruits and fruits in syrup. Try specialities like ratatouille, or cassoulet, mango chutney or the more traditional apple and raisin chutney. Perhaps you could see a white wine jelly on the table along side your winter roast. Each recipe comes with full instructions and plenty of tips for serving. There are loads of ideas for using your stored booty as well — this is truly an *Earth Garden* guide to using your harvest.

Building Tipis & Yurts
by Blue Evening Star
Soft cover, medium size,
full colour, 128 pages.
\$35.00 inc GST*

This is a great book for the dreamer and the doer alike. If you are looking for clear, detailed instructions on how to assemble a portable round home it's all here. Perhaps you'll enjoy this book just to see how others live. The historical photographs of native American Indians are compelling. Crow Indians riding by snow covered tipis, women of the Blackfeet tribe erecting tipis, or the skin-covered tipis of Labrador in 1864.

Having pondered the past, this

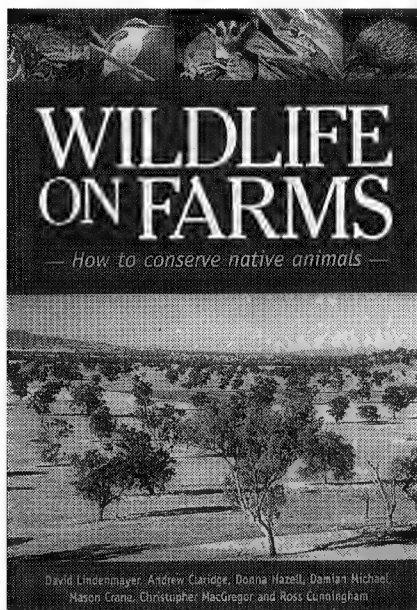
BUILDING & TIPIS YURTS

Authentic Designs for Circular Shelters



BLUE EVENING STAR

book is very much for the now. Learn what tools and materials you will need, then follow clear instructions and diagrams for building either a tipi or a yurt. Look at issues such as heating, ventilating and bathrooms as well! Did you know that the modern yurt differs little to those of 800 years ago used by Genghis Khan? The yurt was lightweight enough for transportation yet designed to also withstand the high winds of the Mongolian steppes. Originally yurts were framed with willow and covered with handmade felt. Nowadays yurts even come prefabricated with aluminium frames and canvas covers. Here Blue recommends straight, unknotted, kiln dried timber for your frame (plantation please!) and a canvas cover. The strength of this book is in the photographic, step by step guide to assembling your shelter. Be inspired and get those sewing machines ready.



**Wildlife on Farms (how to
conserve native animals)
by D Lindenmayer et al
Published by CSIRO
Publishing
Soft cover A5
Full Colour 117 pages
\$29.95 inc GST***

This is quite an incredible little book loaded with accurate information. It is in fact the product of a seven year study of biodiversity conservation in agricultural and grazing landscapes of south eastern Australia. *Wildlife on Farms* outlines the key features of animal habitats — large flowering trees, hollow trees, ground cover, understorey vegetation, dams and watercourses — and describes why landholders should conserve these habitats to encourage wildlife on their farms. It shows — in detailed practical ways — how wildlife conservation can be integrated with farm management and the benefits this can bring.

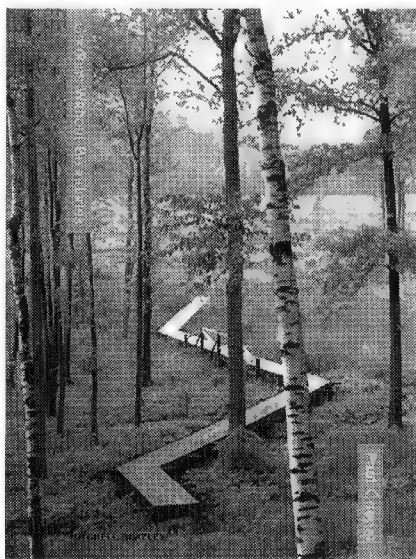
Did you know that the common galah is far more numerous and widespread than it was at the time of European settlement? This is of course due to the availability of water but also cereal crops and agricultural weeds. Galahs and cockatoos can do a lot of damage to crops and they will also compete for tree hollows with other, less common, hollow-dependent parrots. Believe it or not, a good way to deter

them is revegetation because it disturbs the line-of-sight for 'sentinel' members of the flock who watch for predators as the rest of the flock feeds.

This book is fabulously concise and cleverly set out. By presenting 29 example species (mammals, birds, reptiles and amphibians) each entry is described, its common name given, its call, distribution, conservation status and finally its key needs. Then comes the 'what-you-can-do' list which is clearly cross referenced with the rest of the book. The high quality colour photographs make it very clear what you're looking for. All very empowering and positive, and very practical. I think this is a much needed publication — every farmer and landholder should have one. It would also make a fantastic teaching tool for Landcare groups and schools.

**Gardens Without
Boundaries
by Paul Cooper
Large format,
full colour, 176 pages,
hardcover
\$59.95 inc GST***

Gardens Without Boundaries is a book for those passionate about creating a living environment around them. It is for those who want to understand the fundamental design theories that humans have used for centuries to blur or conceal the boundaries between the 'managed garden' and its surrounding landscape.



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Author, Paul Cooper, is (not surprisingly) a lecturer in art and design and a successful sculptor. The gardens presented in this book are from all over the world and offer a diverse range of settings. From rural to urban landscapes. In many ways this book is challenging, but gives the lay person (such as myself) many wonderful and stimulating ideas for blending the back garden with the back drop of the bush. This I have always pondered when planting deciduous plants alongside our wonderful bush landscape.

Paul explores all of the techniques that have evolved over the centuries. He looks at borrowing the surrounding landscapes, deception, dissolving the edge (of the garden), the garden Trouvé, mimicry and the very artistic, garden as 'event'. I enjoyed immensely the use of sculpture and stone throughout this book, in particular when blending the garden with a seascape.

This book is a very up-to-date look at garden designers from around the world and a peek into some very distinguished private gardens. The urban garden hasn't been overlooked. Paul looks at the use of Trompe L'oeil using new materials such as glass and plastic. Traditional ideas are reworked to devise new ways to mimic nature. From the tropics to the arid, this is a very avant garde book that sets the gardener's mind soaring.

A Place on Earth

An anthology of nature writing from Australia & North America

Edited by Mark Tredinnick

**Published by UNSW Press
\$29.95 inc GST**

Reviewed by Linda Wheeler

I started reading *A Place on Earth* wondering what I would gain from reading about the places that other people call home. This anthology, however, has taken me completely by surprise. Yes, it does give descriptions of different parts of Australia and North America where the authors have chosen to live, but there is so much more than this.

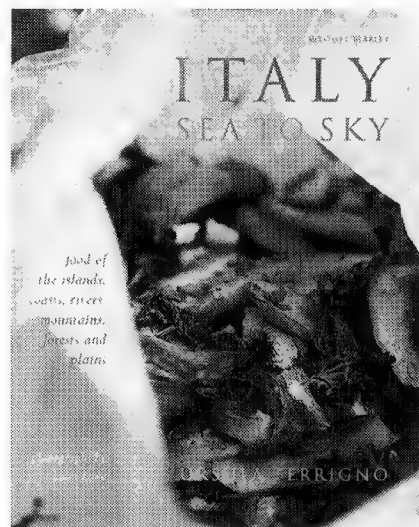
Here we have a collection of won-

derful writers sharing their experiences of place. As you read the very diverse and individual stories, you begin to sense that, although steeped in their surroundings — smell, sound, climate — there is no claim of ownership here. Each person seems to step through nature in a considered and practical way, but also with a sense of wonderment, often seeing the land from an uncommon and revealing perspective as in Tim Winton's *Landing* or Charmian Cliff's *The Centre*. Others are saturated by the environment itself and its history as described by Mark Tredinnick in *Falling Water* and John Cameron in *Beneath Capital Hill: The Unconformities of Place and Self*, which also explores our fragile settlement on land.

John Haines allows us an insight into his life in the harsh, snow filled vista of the Alaskan mountains. As we pass through the seasons in *Pieces of a Place*, his self-reliance and respect for his environment are evident in a landscape that is unforgiving and potentially dangerous. Twenty-six contributors are represented here, each with their own individual style and obvious deep regard for the land. Their storytelling is inspirational. This book would grace any bookshelf, to be taken down and read when your need to be grounded is strong or your desire to escape is at its most pressing. A wonderful read.

**Italy Sea To Sky
by Ursula Ferrigno
Hardcover, full colour,
188 pages.
\$49.95 inc GST***

If you consider the geography of Italy, you will quickly understand the diversity of this fabulously flavoursome book. Ursula explains that geography has played a most important role in the development of local styles of cooking. For those living on the coastline, seafood is a major ingredient. For those with no access to the sea, fish would be preserved and imported. For those living in the heat of the south, sun loving vegies would be everyday foods. For those in the North pasta, beans and polenta keep the winter chills at bay. So



Italy offers up coastline, forests, plains, mountain, lakes and rivers as well as islands. With it comes a most diverse cuisine that is explored in this masterpiece of a recipe book.

Divided into six chapters, this book is a little unexpected in its presentation. Recipes are presented according to their geography. Chapter one is mountains, chapter two forests and woods. Three is the coast, four plains, five lakes and rivers and finally islands. As you can imagine the mountains offer wonderful stuffed olives, breads and of course a delightfully simple ricotta cheese cake. Forest and woods offer up the wonderful mushroom recipes. Nuts are a specialty here. Try eggplant stuffed with almonds or find a traditional panforte (nougat) recipe. Learn how to make a simple peasant pasta, bean and clam soup or perhaps a traditional sardine pizza.

The beauty of this book lies in its simplicity. The ingredients are simple but must be fresh which makes it a perfect Earth Gardener's harvest book. Exquisitely photographed (very textural) and thoroughly indexed, this is a classic, truly Italian cook book.

***These books are available from The Good Life Book Club by phoning (03) 5424 1814, or writing to 17 Falls Rd, Trentham, Victoria, 3458 for ordering details or a free catalogue.**

EARTH GARDEN UNCLASSIFIEDS

Unclassifieds are 80 cents (including GST) per word prepaid.
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(Secure payment by credit card is also available at the website.)



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THE BLUE MOUNTAINS AND NEPEAN HERB GROUP is holding a Festival of Herbs at Wentworth Falls on Saturday march 13 from 10am - 4pm. The venue is the Wentworth Falls School of Arts Building, Great Western Highway. Parking is available nearby and it's within walking distance of the station. There will be plant stalls, a variety of craft and food stalls each with a theme of herbs, demonstrations and talks, and a display herb garden — admission is free. Further details Jacqui (02) 4751 5163.

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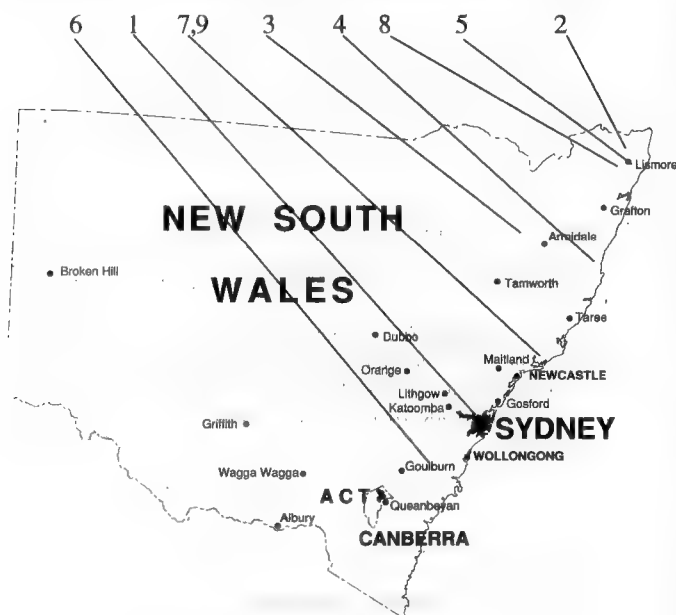
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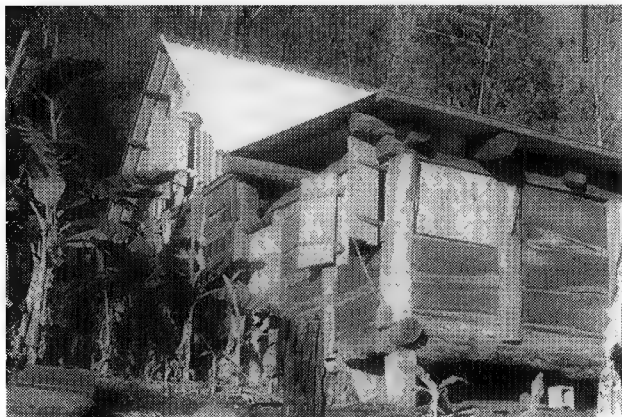
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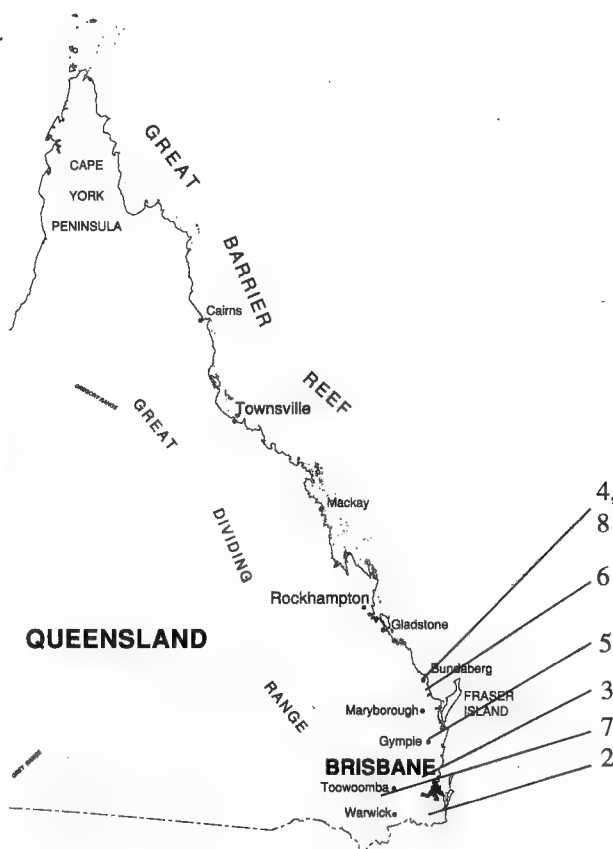
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Springs. Quiet, dead end road, friendly neighbours, abundant wildlife, 2 chook runs, wood and gas heaters plus Wellstood slow combustion stove with wetback (solar + mains boosted), 12 X 6 m garage/workshop. One hour drive to centre of Melbourne, 20 minutes to Woodend railway station. 3 minutes drive to Trentham, 15 minutes to Daylesford/Hepburn Springs. \$385,000 firm. Please phone our agents (Dick – Woodend) on (03) 5427 2277 or (Keith – Daylesford) on (03) 5348 3429. (SEE PHOTOS.)

7. LARA, 20 minutes Geelong, 50 minutes Melbourne. Walk to shops, train, medical centre. Solar passive home, 1470 square metre sloping block. Four bedrooms (BIRs); master ensuite. Exposed oregon beams; large lounge, dining and family rooms. Modern kitchen; ducted heating. Double carport, garage, shed. Variety of productive fruit trees, vegie patches, low maintenance native trees, shrubs and grasses. \$358,000. Contact Steve (03) 5282 4262.

8. YINNAR SOUTH. Garden and wildlife paradise with contemporary mudbrick home. Located 25 minutes southwest of Traralgon, 12 minutes to Monash University Gippsland and close to local school and national park. Sheltered private 2.7 acres in rural community with glorious views to Strzelecki Ranges. The light, airy 3 BR house has large open-plan living areas, cathedral ceilings, floor-to-ceiling timber features, slate & terracotta tiles, floor-to-ceiling windows with French-doors to patio & verandahs. All electric plus solid fuel heater, solar hot water. Double garage & carport, workshop, cat enclosure, fully-fenced paddock & mature orchard. There is abundant water catchment and storage capacity, also permanent spring, fern gully & dam. The rich volcanic soil is a gardener's dream! The extensive native gardens blend with exotics and mature trees attracting multitudes of birds and a wide variety of native animals, especially koalas. There is current "Land for Wildlife" classification. \$305,000. Phone (03) 5169 1727.

TASMANIA

1. BUSH RETREAT AND ACCOMMODATION at Gowrie Park, 45 km south of Devonport, half way to Cradle Mountain. Log style licensed restaurant and function room with hand split shingle roof. Four self contained cabins, each sleep up to 6 plus camping and caravan sites all with underground power as well as backpacker accommodation for 110. Includes 3 BR W/B house plus extra cottage, barn, stables, horse paddock and an authentic working blacksmith's shop. Set on 14 acres on 2 titles with main road frontage and sealed access, town water, sewer, 3 phone lines, public phone and three-phase power. Asking \$695,000 w.i.w.o. including all equipment, fittings, stock and large collection of pioneer farm equipment. Training/guidance provided if needed. Contact the owner, Charlotte King on (03) 6491 1385 or PO Box 39 Sheffield, 7306 or visit <www.users.bigpond.com/weindorfers>.

2. NORTH TASMANIA, 27 acres self sufficient, freehold forest, three and a half acres cleared. Next door to living water sanctuary — Wellbeing Centre. Only 6 km from Meander, your private land offers virgin soil, myrtle/

fern lined creek frontage; breathtaking panoramic views over open valley toward World Heritage Forests/Mountains, (2 and a half hour walk away). Spring fed dam, walking track, shed, phone, three quarter fenced; magnificent building sites. Could custom design/build low cost cottage while next door shack is available. Price \$81,000 neg. Flexible deposit. Phone Thomas (03) 6369 5131.

3. MOLESWORTH, DERWENT VALLEY. St Aidans Church (1906) has been tastefully converted into a 2 BR bush residence. Mezzanine bedroom, spiral staircase and large open plan living/dining. Modern kitchen, bathroom & separate laundry. Stained glass windows and wood heater. Approx 25 minutes to Hobart. Access to picturesque winter fed dam. <rpower1@vtown.com.au> \$135,000. Phone owner on (03) 6261 5141.

LAND SEARCH IN NORTHERN TASMANIA

The following contacts may be useful for researching land to buy in northern Tasmania from the Launceston area west to the Burnie area.
 Elders Launceston, (03) 6331 2022, www.elders.com.au/tas
 PRDNationwide Launceston, (03) 6334 0111, www.prdnationwide.com
 Roberts, 1800 063311, www.roberts.com.au
 Harrison Humphries (03) 6334 1155, www.harrisonhumphreys.com.au
 Towns Shearing (03) 6334 3484, www.townsshearing.com.au
 Statewide Launceston (03) 6343 0000, www.statewiderealestate.com.au
 Roberts Longford, (03) 6391 2999, www.robertsre.com.au
 LJ Hooker Deloraine, (03) 6362 2255, www.ljhooker.com
 Ray White Devonport, (03) 6424 4888, www.raywhite.com/tas
 LJ Hooker Devonport, (03) 6424 7333, www.ljhooker.com
 Emu Bay Real Estate, Burnie, (03) 6432 4055, www.emubay.com
 City & Rural Burnie, (03) 6431 2222, www.cityrural.com.au
 Burnie First National (03) 6431 4544, www.burniefirstnational.com.au

WESTERN AUSTRALIA

1. PERTH. Suburb of Koondoola, 15 km from the city, 15 km from the ocean, 692 square metres, 3 bedroom, 1 bathroom plus entry/lounge brick veneer house. Polished floorboards in designed pine cabinets and table in a very homely kitchen, timber leading to the wall in the living room. Split system air conditioning in one room. The property includes a cellar and an extensive large paved, zincalume-clad, metal framed patio surrounds the whole house, covered with mossie net so it is enjoyable all year for outdoor living. The garden has lots of trees and it's a bird paradise. The soil is built up with organic matters, no chemicals used. \$165,000. Phone (08) 9247 1638. Mob. 0414 360 025. Email: <msmaus@tpg.com.au>.

WANTED

MELBOURNE (HAMPTON EAST). 30+ non-smoker for quiet house with female. Organic garden, trees, \$390pcm + bills. Annette (03) 9553 5785.

WANTED HOUSE TO RENT/SIT/SWAP in SE NSW (Bega/Merrimbula) for Melbourne family (taking break from our business) for up to 6 months from July 04. Responsible, will care for animals, garden, house. Phone (03) 9484 6473. Email <diddles@aardvark.net.au>.

A selection of sustainable living books available from Earth Garden. For the full list of books, see 'The Good Life Book Club' catalogue (available free). Phone The Good Life hotline on: (03) 5424 1814.

Please add postage, and allow 3 weeks for delivery. All prices include GST

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Green House Plans - \$19.95 (add postage)NZ	\$
The House That Jackie Built - \$16.95 (add postage)NZ	\$
Strawbale Homebuilding (160 pages) - \$19.95 (add postage)NZ	\$
501 TV-Free Activities For Kids (500 pages) - \$19.95 (add postage)	\$
The Earth Builder's Handbook (80 pages) - \$8.80 damaged (add postage) NZ	\$
Jackie French's Household Herb Book by Jackie French - \$10.95 (add postage) NZ	\$
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Earth Garden Natural Dog Soap - 3 for \$9.80 (add postage)	\$
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NO NEED TO CUT THIS PAGE. JUST SEND US THE DETAILS IN A LETTER IF YOU PREFER.

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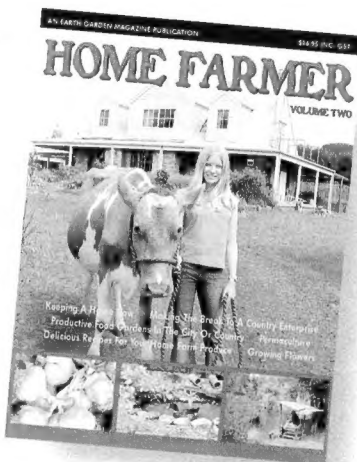
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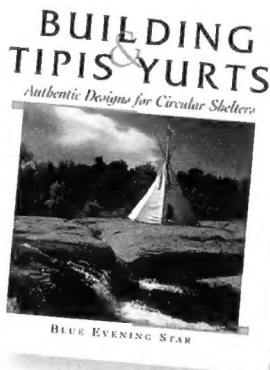
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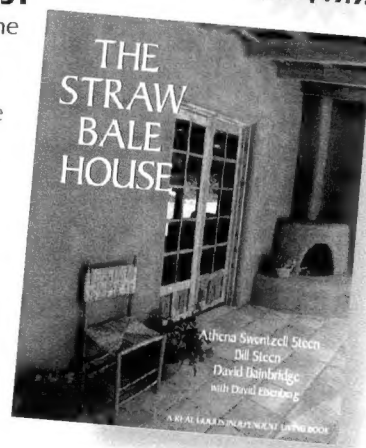
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This is the 'bible' at the 1997 price! Get in before George Dubya sneezes and the Aussie dollar crashes again.

Building with straw is the old, rural-American method of low-cost, quick-to-build, well-insulated house building which is rapidly taking hold in Australia. Thousands of strawbale homes have been built worldwide using this book, which has sold more than 100,000 copies. Stunning colour photos, plus B&W pictures, diagrams, bibliography, index, 297 pages.



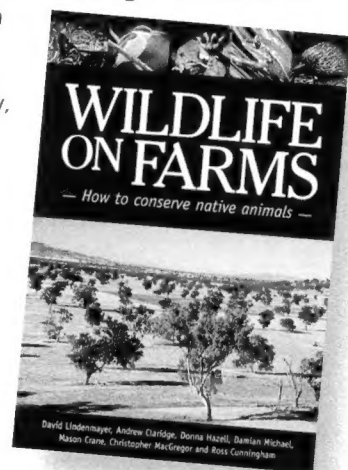
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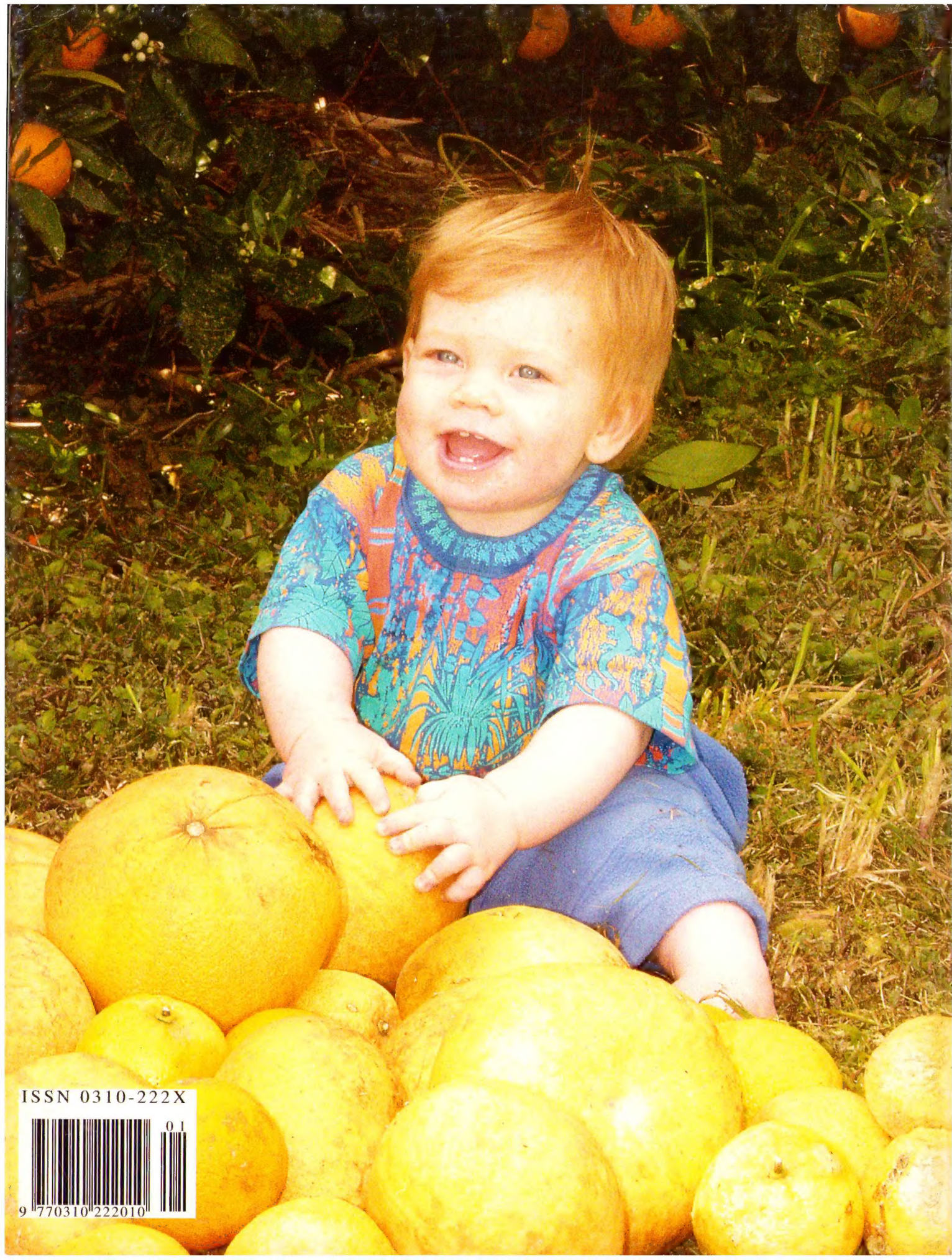
David Lindenmeyer and others

\$29.95 inc GST

This is a clever book because although the first half is profusely illustrated with details, drawings and photos of how to make any farm wildlife friendly, the second half is even better: a guide to 29 example species and what can be done on any rural property to enhance their habitat. The species — mammals, birds, reptiles and amphibians are all common to southern and eastern Australia and include cockatoos, frogs, possums, platypus, and much more. This is an extremely clever and highly practical book. 118 pages.



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